CDP-C400/C401/C500

SERVICE MANUAL

US Model
CDP-C400/C401/C500

Canadian Model
AEP Model
E Model
CDP-C500

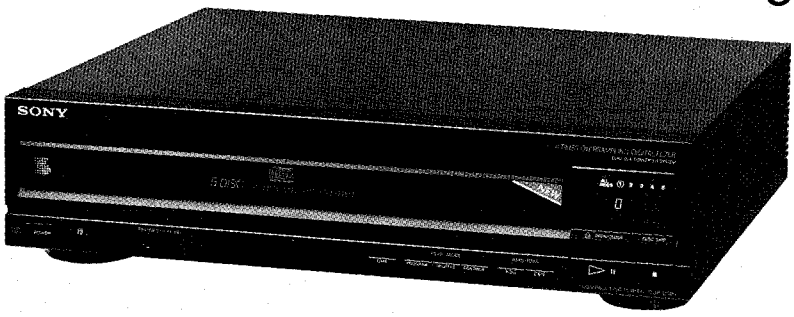

Photo: CDP-C500

SPECIFICATIONS

COMPACT DISC PLAYER

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	2 Hz – 20kHz ($\pm$1 dB)
Signal to noise ratio	More than 100 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (1 kHz)
Channel separation	More than 95 dB (1 kHz)
Wow and flutter	Below measurable limit
Outputs	LINE OUT (phono jacks) Output level 2V (at 50 kilohms) Load impedance over 10 kilohms PHONES (stereo phone jack) (CDP-C500/C400 only) Output level 0 – 10 mW (variable) (at 32 ohms)

General

Power requirements	US, Canadian Model: 120 V AC, 60 Hz AEP Model: 220 V AC, 50/60 Hz E Model: 110–120, 220–240 V AC, 50/60 Hz
requirements	
Power consumption	10 W
Dimensions	Approx. 430 × 110 × 385 mm (w/h/d) (17 × 4 3/8 × 15 1/4 inches) not including projecting parts and controls
Weight	Approx. 4.9 kg (10 lbs 13 oz), net

REMOTE COMMANDER (RM-D505) (supplied only for the CDP-C500)

Remote control system	Infrared control
Power requirements	3 V DC with two size AA (R6) batteries
Dimensions	Approx. 43 × 20 × 175 mm (w/h/d) (1 1/16 × 13/16 × 6 15/16 inches)
Weight	Approx. 110 g (4 oz) including batteries

SUPPLIED ACCESSORIES

Audio signal connecting cord
(phono plug × 2 ↔ phono plug × 2) (1)
Sony SUM-3 (NS) batteries (2)
Operating Manual (1)

MICROFILM

COMPACT DISC PLAYER

SONY

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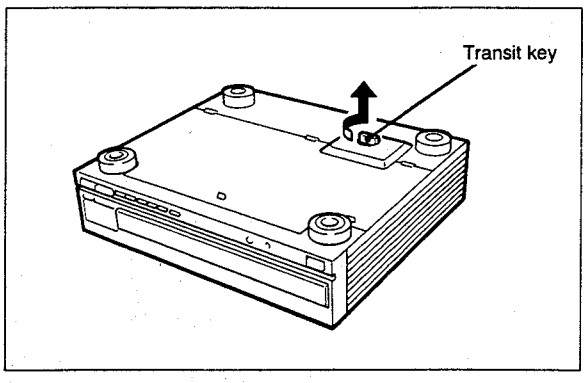
SECTION 1
SERVICING NOTES

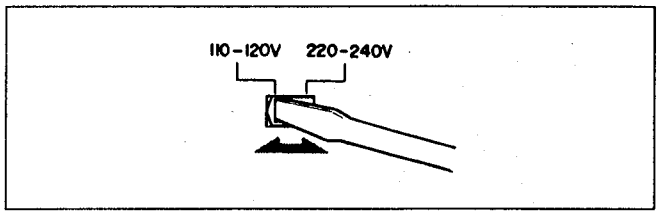
Note on the Transit Key



The white transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.
When transporting the unit, replace the key in its original hole and lock it in place.

Adjusting Operating Voltage

For the customers of the model equipped with the voltage selector (E model)
Check that the voltage selector is set to the local power line voltage. If not, set the selector to the correct position before connecting the AC power cord to a wall outlet.



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

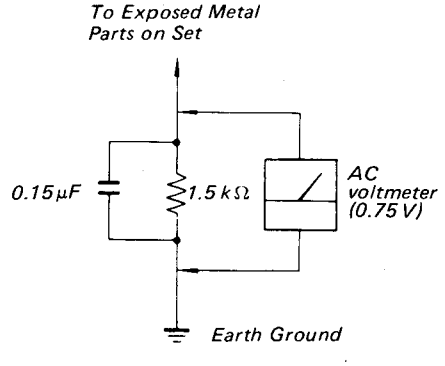
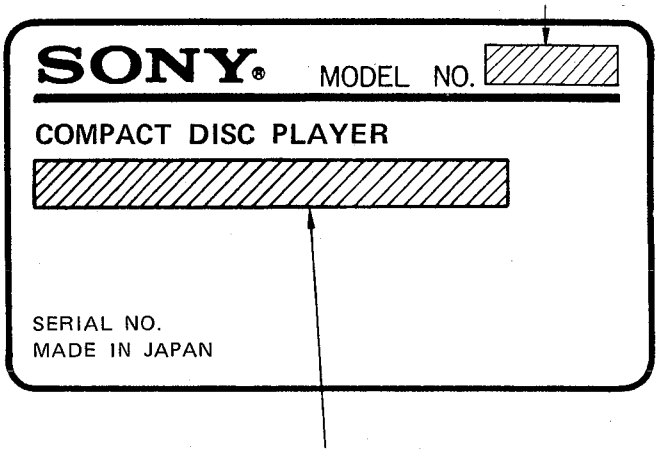


Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

– Specification Labels –

CDP-C400
CDP-C401
CDP-C500



US, Canadian model: AC 120 V 60 Hz 10 W
AEP model: AC 220 V 50/60 Hz 10 W
E model: AC 110–120, 220–240 V 50/60 Hz 10 W

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output: max. 44.6 μW*

     * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optiocal Pick-up Block (including APC borad).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*

     * Målt i 1,6 mm afstand fra overfladen af objektivlinsen på den optiske pick-up enhed.

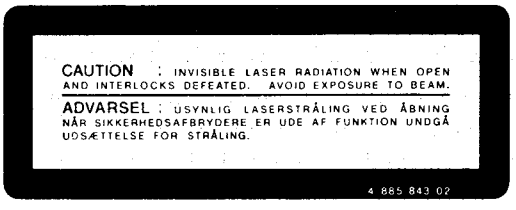
   - Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laserdioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning

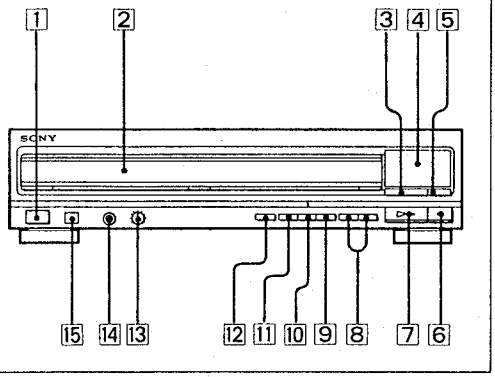

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.
4 885 843 02

VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

SECTION 2
GENERAL

Location and Controls

Front Panel

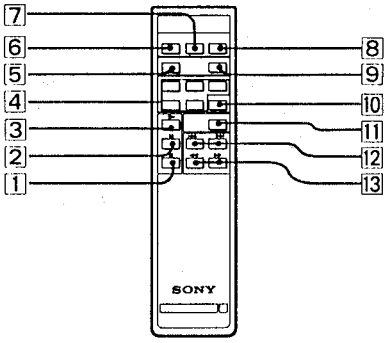


1 POWER switch
2 Disc tray
3 ≜ OPEN/CLOSE button
4 Display window
5 DISC SKIP button
6 ■ (stop) button
7 ▶II (play/pause) button
8 ⏮⏭ (AMS*/RMS**) button
9 CONTINUE button
10 SHUFFLE button
11 PROGRAM button
12 TIME button
13 (headphone) LEVEL control (CDP-C400/C500)
14 PHONES (headphones) jack (CDP-C400/C500)
15 Remote sensor

*AMS is the abbreviation of Automatic Music Sensor.
**RMS is the abbreviation of Random Music Sensor.

Remote Commander

RM-D505

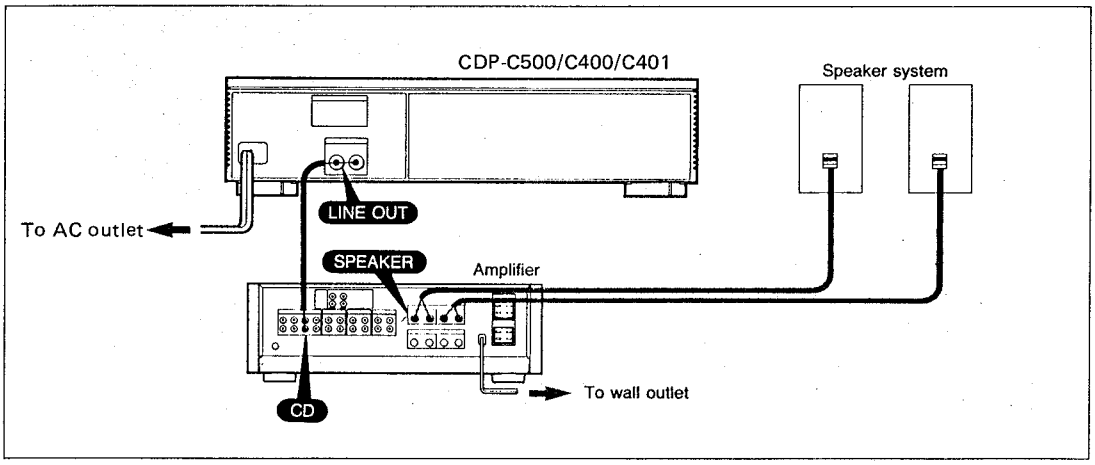


1 ■ (stop) button
2 II (pause) button
3 ▶ (play) button
4 DISC 1 ~ 5 buttons
5 TIME button
6 PGM (program) button
7 SHUFFLE button
8 CONTINUE button
9 REPEAT button
10 DISC SKIP button
11 FADER button
12 ⏮⏭ (AMS*) buttons
13 ◀◀ ▶▶ (manual search) buttons

Connecting the CD Player

Notes on Connection

- Turn off the power of each unit before making connections.
- Connect the AC power cord last.
- Be sure to insert the plugs firmly into the jacks. Loose connection may cause hum and noise.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.
- Cord plugs and jacks are color coded: Rod plugs and jacks are for the right channel (R) and white ones for the left channel (L).



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

Chucking Arm Height Adjustment

This adjustment should be parformed after the electrical adjustment and on replacing adjusting screw, magnet, or chucking pulley.

Procedure:

1. Set disc (YEDS-18) to the optical pick-up block. (Fig. A)
2. Adjust the bracket (press pulley) to the center of the magnet with adjusting screw. (Fig. B)

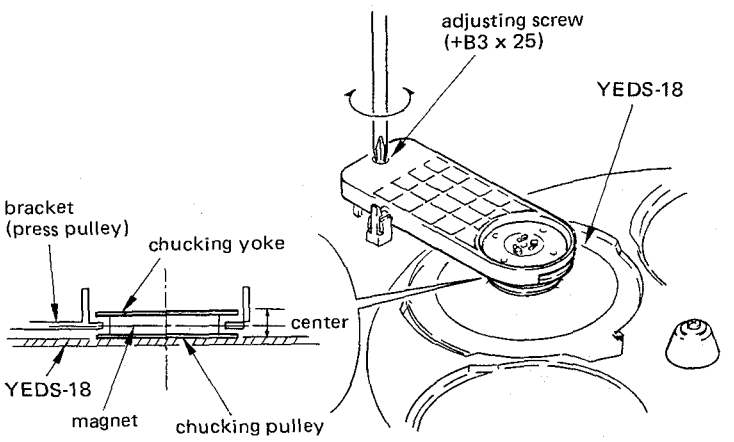


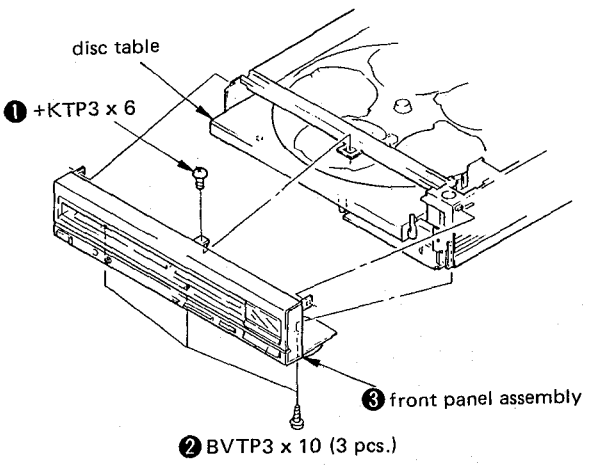
Fig. B

Fig. A

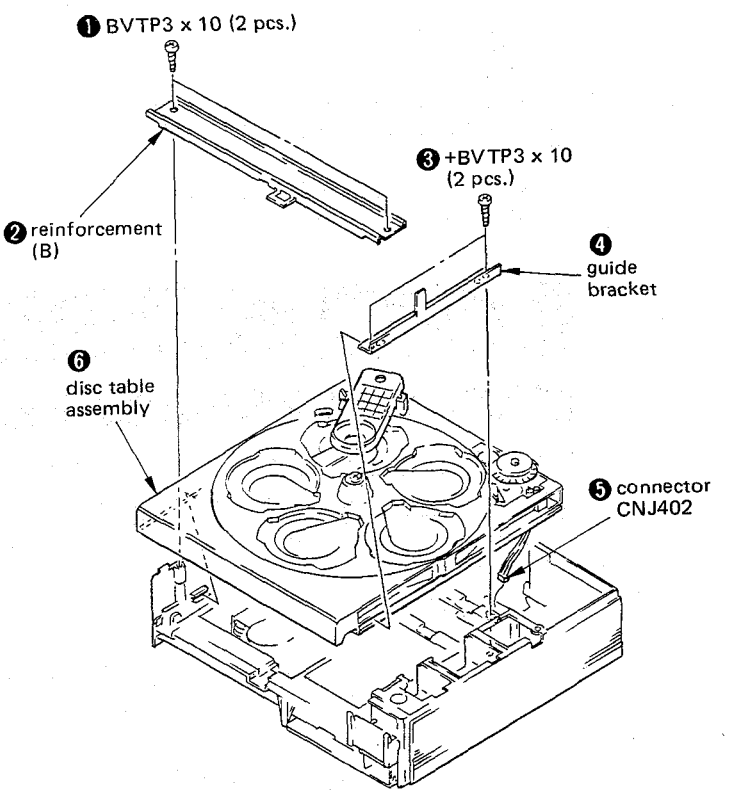
3-2. BEFORE ADJUSTMENTS

Note: Follow the disassembly procedure in the numerical order given.

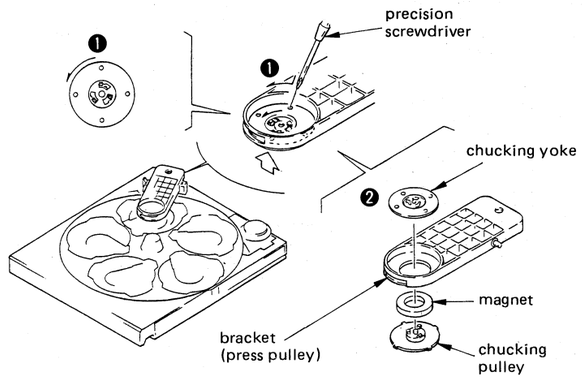
1. Remove the case.
2. Remove the frontpanel assembly.



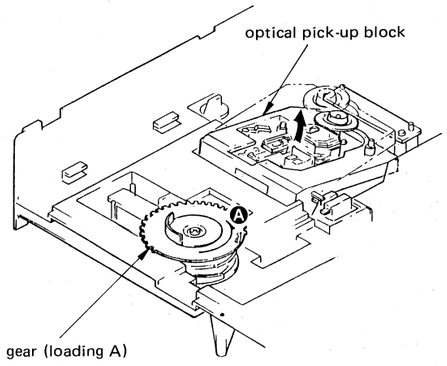
3. Remove the disc table assembly.



4. Remove the chucking pulley.

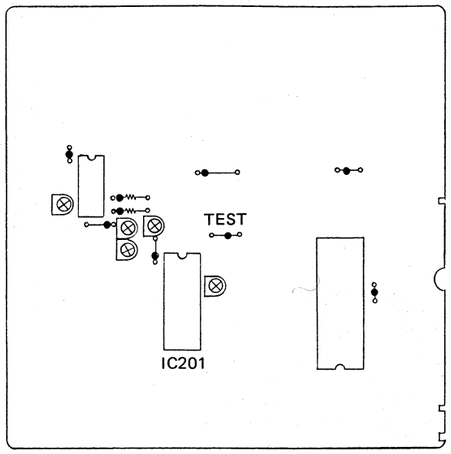


5. When the optical block is down under, move up it by rotating gear (loading A) in the arrow Ⓐ direction with hands.



6. Connect test point TP (TEST) to ground with lead wire. (TEST MODE*)

[MAIN BOARD] – Component Side –



* Test Mode:
When turning POWER switch on, immediately the set plays the fifth track on the disc and continues playing in spite of GFS output. After that, it operates normally.

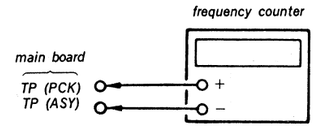
7. Set disc (YEDS-18) to the optical pick-up block and press it with the chucking pulley removed in item 4.

3-3. ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 (Part No : 3-702-101-01) disc unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.

RF PLL Frequency Adjustment/Lock Frequency Check

Procedure :

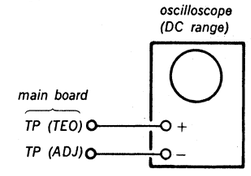


1. Put the set into test mode.
2. Connect test point TP (ASY) to ground with lead wire.
3. Turn POWER switch on.
4. Connect the frequency counter to test point TP (PCK).
5. Adjust RV5 so that the reading on frequency counter is 4.3218 MHz ±30 kHz.
   . . . . . (RF PLL frequency adjustment)
6. Remove lead wire connecting TP (ASY) to ground.
7. Set disc (YEDS-18) and press ▷ PLAY button.
8. Confirm that the reading on frequency counter is 4.3218 MHz.
   . . . . . (Lock frequency check)
9. Turn POWER switch off.

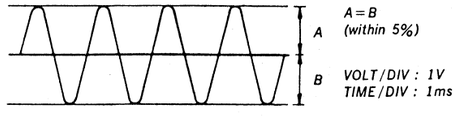
E-F Balance Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure :



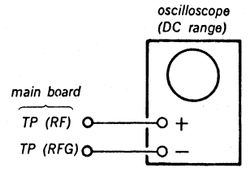
1. Put the set into test mode.
2. Connect test point TP (TES) to ground with lead wire.
3. Connect oscilloscope to test point TP (TEO).
4. Set disc (YEDS-18) and turn POWER switch on.
5. Adjust RV1 so that the traverse waveform is symmetrical above and below.
6. Turn POWER switch off.
7. After adjustment, remove the lead wire connected in step 5.



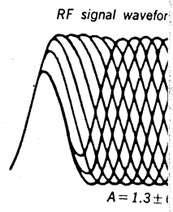
Focus Bias Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure :



1. Put the set into test mode
2. Connect oscilloscope to TP (RFG).
3. Set disc (YEDS-18) and tu
4. Adjust RV2 for an opti that the peak is maxim that shape "◇" can be of the waveform.
5. Turn POWER switch off.



REFERENCE

Focus/Tracking Gain A

A frequency responce ar perform this adjustment exa

However, this gain has a r there is no problem. There ment.

Focus/tracking gain deter cal and horizontal) relative when the 2-axis device oper

However, as these recipro where both are satisfied.

- When gain is raised, the r ates increases.
- When gain is lowered, occurs more easily.
- When gain adjustment is

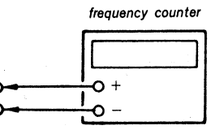
Symptoms \ Gain
• The time until musi starts becomes longer fo ■ STOP → ▷ PLAY o automatic selection. (⏮ ⏭ buttons pressed. (Normally takes about seconds.)
• Music does not start an disc continues to rotat for ■ STOP → ▷ PLAY or automatic selection. (⏮, ⏭ buttons pressed.)
• Disc table opens shortly after ■ STOP → ▷ PLAY.
• Sound is interrupted dur ing PLAY or time counte display stops progressing.
• More noise during 2-axi device operation.

ADJUSTMENTS

ts in the order given.
: No : 3-702-101-01) disc unless other-

e with more than 10 MΩ impedance.

Adjustment/Lock Frequency Check



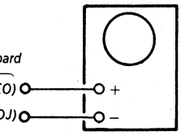
ode.
(ASY) to ground with lead wire.
on.
counter to test point TP (PCK).
the reading on frequency counter is

ncy adjustment)
necting TP (ASY) to ground.
d press ▷ PLAY button.
reading on frequency counter is

y check)
off.

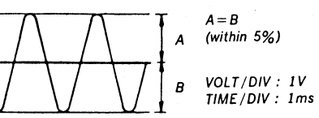
nent

d be made when replacing TOP (T-



ode.
(TES) to ground with lead wire.
o test point TP (TEO).
d turn POWER switch on.
the traverse waveform is symmetrical

off.
ove the lead wire connected in step 5.



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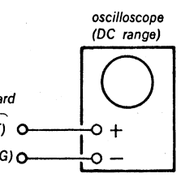
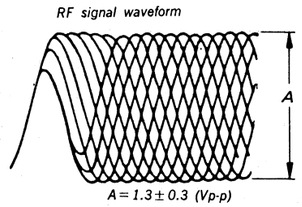
d be made when replacing TOP (T-



1. Put the set into test mode.
2. Connect oscilloscope to test point TP (RF) and test point TP (RFG).
3. Set disc (YEDS-18) and turn POWER switch on.
4. Adjust RV2 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.
5. Turn POWER switch off.



REFERENCE

Focus/Tracking Gain Adjustments

A frequency responce analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow up (vertical and horizontal) relative to mechanical noise and shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

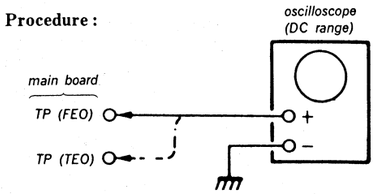
Symptoms \ Gain	Focus	Tracking
• The time until music starts becomes longer for ■ STOP → ▷ PLAY or automatic selection. (⏮, ⏭ buttons pressed.) (Normally takes about 1 seconds.)	low	low or high
• Music does not start and disc continues to rotate for ■ STOP → ▷ PLAY or automatic selection. (⏮, ⏭ buttons pressed.)	–	low
• Disc table opens shortly after ■ STOP → ▷ PLAY.	low or high	–
• Sound is interrupted during PLAY or time counter display stops progressing.	–	low
• More noise during 2-axis device operation.	high	high

The following is a simple adjustment method.

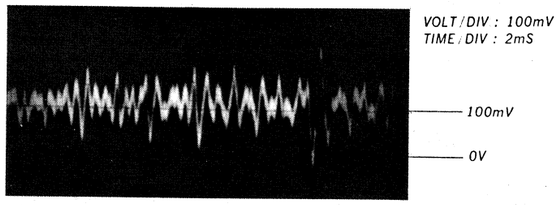
–Primary Adjustment–

Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the position after the primary adjustment are only a little different, return the controls to the original position.

Procedure :

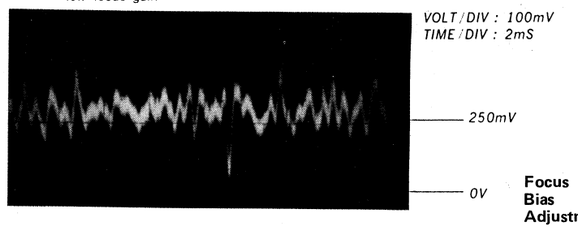


1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.)
2. Put the set into test mode.
3. Set disc (YEDS-18) and turn POWER switch on.
4. Connect oscilloscope to main amp board TP (FEO).
5. Adjust RV3 so that the waveform is as shown in the figure below. (focus gain adjustment)

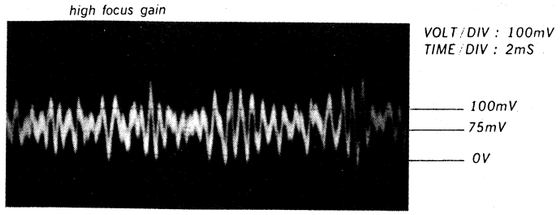


- Incorrent Examples (DC level changes more than on adjusted waveform)

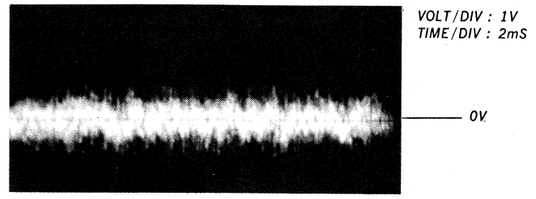
low focus gain



high focus gain

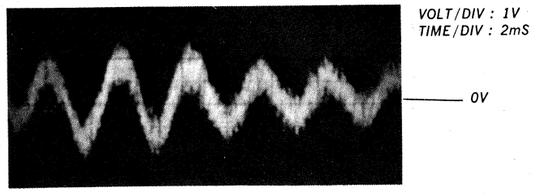


6. Connect oscilloscope to main board TP (TEO).
7. Adjust RV4 so that the waveform is as shown in the figure below. (tracking gain adjustment)
8. Turn POWER switch off.

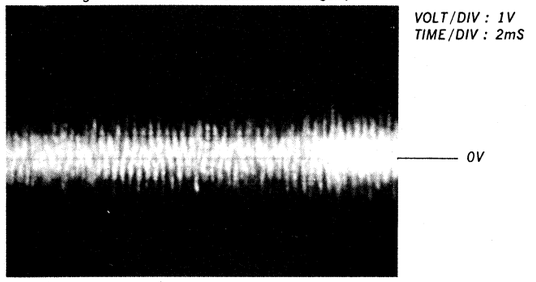


- Incorrect Examples (fundamental wave appears)

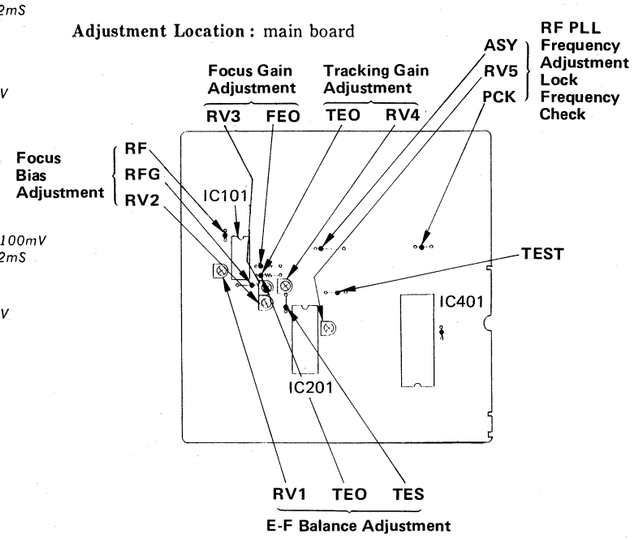
low tracking gain



high tracking gain
higher fundamental wave than for low gain)



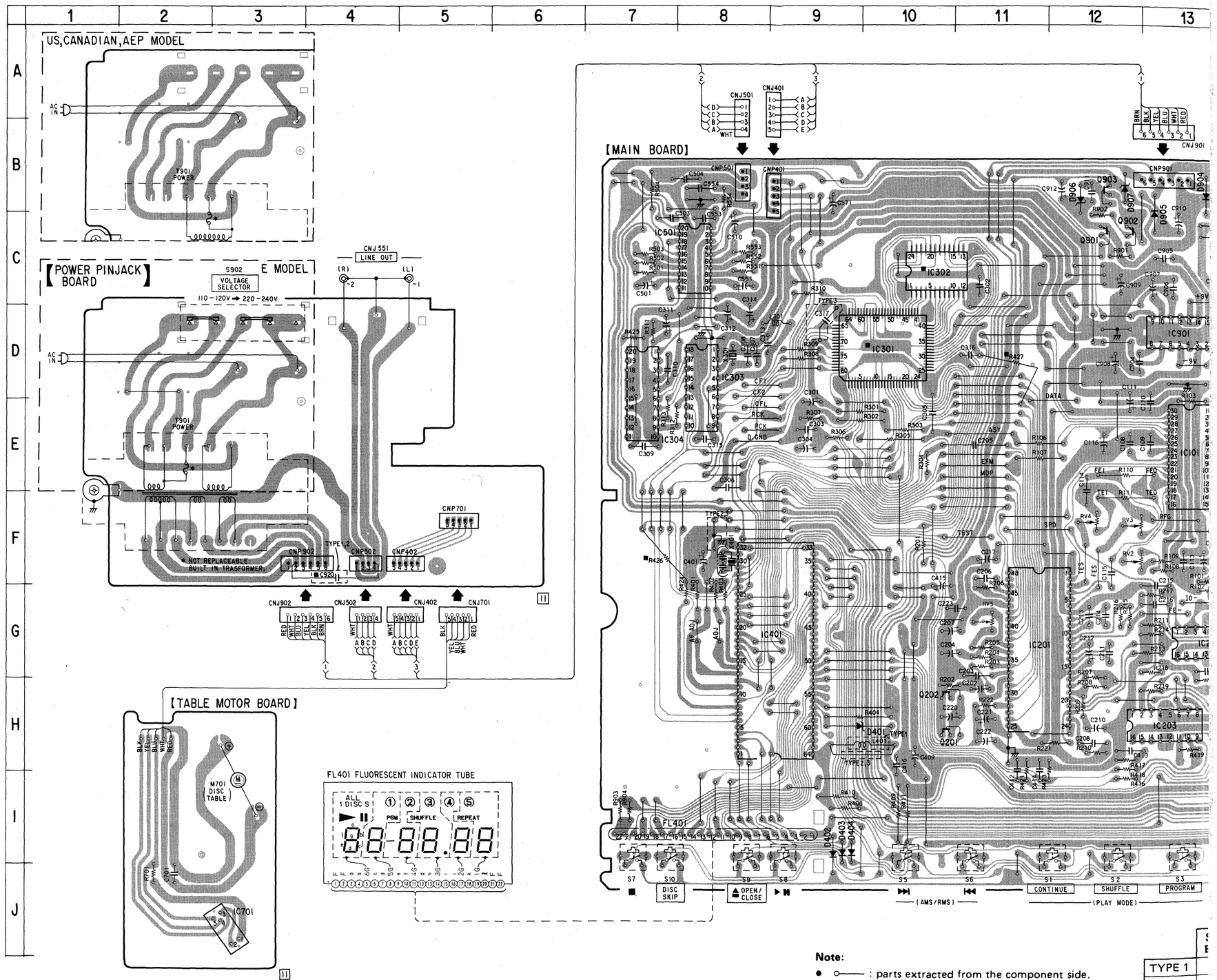
Adjustment Location : main board



SECTION 4
DIAGRAMS

4-1. PRINTED WIRING BOARDS

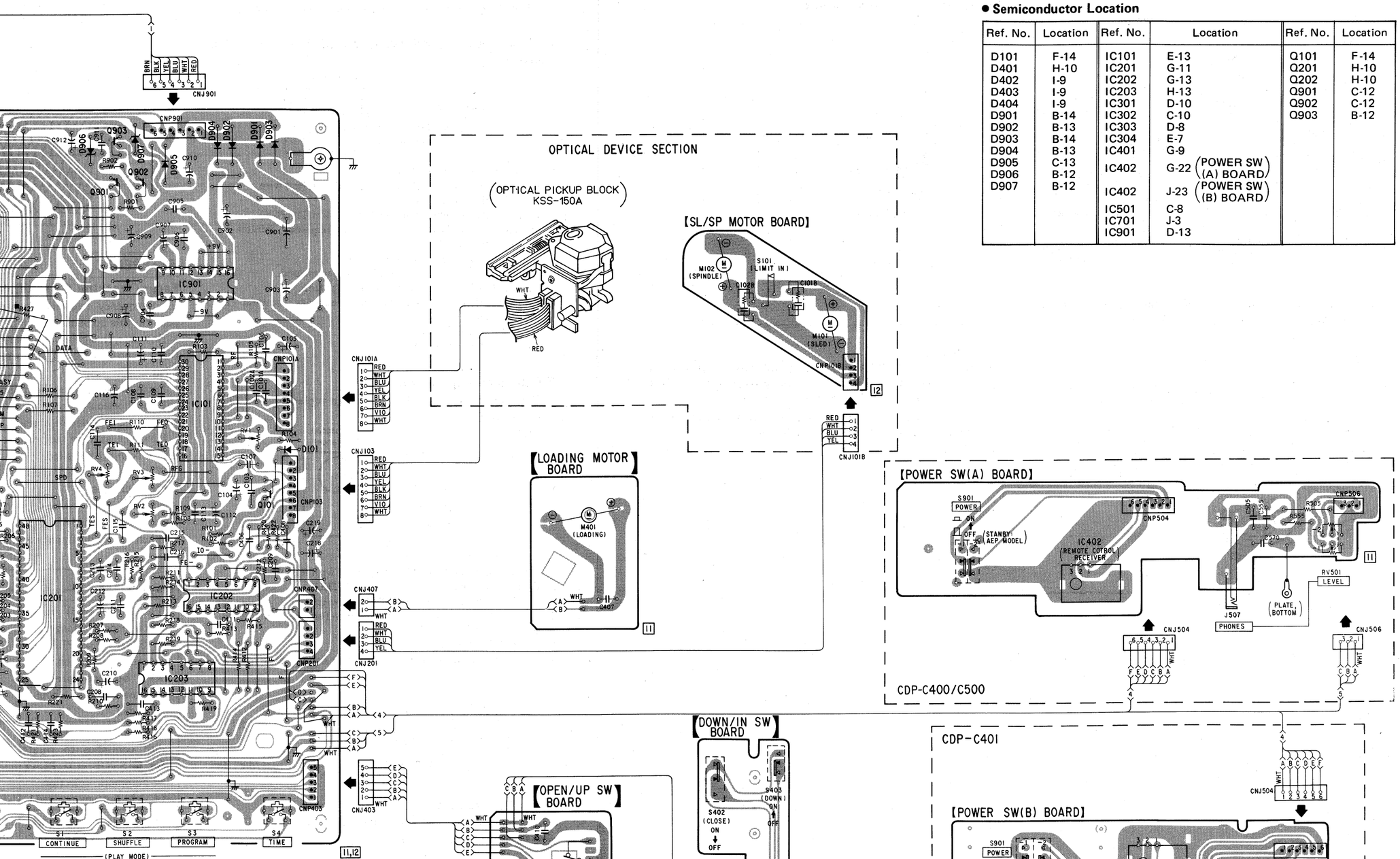
• See page 17 for Semiconductor Lead Layouts and Circuit Boards Location.



Note:

- ○—— : parts extracted from the component side.
- ⊡ indicates side identified with part number.
- ○—●—○ : Jumper wire connected to the ground pattern on the component side.

TYPE 1
TYPE 2
TYPE 3



● **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	F-14	IC101	E-13	Q101	F-14
D401	H-10	IC201	G-11	Q201	H-10
D402	I-9	IC202	G-13	Q202	H-10
D403	I-9	IC203	H-13	Q901	C-12
D404	I-9	IC301	D-10	Q902	C-12
D901	B-14	IC302	C-10	Q903	B-12
D902	B-13	IC303	D-8		
D903	B-14	IC304	E-7		
D904	B-13	IC401	G-9		
D905	C-13	IC402	G-22 (POWER SW (A) BOARD)		
D906	B-12				
D907	B-12	IC402	J-23 (POWER SW (B) BOARD)		
		IC501	C-8		
		IC701	J-3		
		IC901	D-13		

	Suffix of Main Board Part No.	L401	Remark
TYPE 1	-11	Used	CDP-C400/C500 US model only
TYPE 2	-11	Not used	
TYPE 3	-12	Not used	

the component side.
d with part number.
ed to the ground pattern on

[MAIN BOARD]

[LOADING MOTOR BOARD]

M401 (LOADING)
C407 2200p
CNJ407
LM
GND

[SL/SP MOTOR BOARD]

S101 LIMIT IN
C102B
M102 (SPINDLE)
M101 (SLED)
C101B
CNJ201
SW
SP
GND
SL

OPTICAL DEVICE SECTION

OPTICAL PICK-UP BLOCK (KSS-150A)
DETECTOR
CNJ101
D
C
B
A
GND
K
E
F
CNJ103
FOCUS COIL
TRACKING COIL
LASER DIODE
FD
TG
TD
FG
VR
PD
GND
LD

FL401
FLUORESCENT INDICATOR TUBE
ALL
1 DISC S
PGM
SHUFFLE
REPEAT

(PLAY MODE)
S3 PROGRAM
S2 SHUFFLE
S1 CONTINUE
(AMS/RMS)
S6
S5
S4 TIME
S9 OPEN/CLOSE
S8
S7
S10 DISC SKIP
K0
K1
K2
K3
D404 US1060M
D403 US1060M
D402 US1060M

C416 0.01
TYPE1
L401
TYPE 2,3
Vdd

IC203
LOADING MOTOR DRIVE
R419 100k
R418 150k
R417 130k
R416 150k
C413 1000p
IC203 CXA1291P (1/3)
<LOD OUT>
<LOD IN>

IC202
SLED MOTOR/ FOCUS COIL DRIVE
IC201
FOCUS/TRACKING/ SLED SERVO
Q201, 202 PLL SWITCH
C222 1/50V
C221 1/50V
<XRST>
<CLK>
<XLT>
<DATA>
<SENS>
<GFS>

C219 47/16V
C218 47/16V
R221 100k
R212 120k
R211 6.8k
C209 0.1
R213 3.3k
R214 4.7k
IC202 CXA1291P (1/3)
R420 10
C406 0.1
R422 10
C408 0.1
C215 560p
R217 18k
R216 18k
C216 2200p
IC202 CXA1291P (1/3)
R218 47k
R219 33k
IC203 CXA1291P (1/3)

C208 0.01
R210 510k
C210 10/50V
R209 33k
R207 82k
C211 0.1
R208 270k
FE-
C212 3.3/50V
R215 130k
C213 0.033
C214 0.1
TES
TE
DFCT
D. VEE
SENS
FSET
SSTOP
SL-
SLO
SL+
TA-
TAO
A. VCC
TG2
TGU
SRCH
FE-
FEO
FLB
FS3
FGD
VC
FE
ATSC
TZC

A. VEE
COUT
DIRC
XRST
DATA
XLT
CLK
D. GND
BW
PDI
ISET
VCOF
3. 5V
C846
LOCK
MDP
MON
FSW
D. VCC
SPDL-
SPDLO
WDCK
FOK
MIRR
IC201 CXA1082BS
R222 1k
Q201 BA1L4M
R201 10k
DATA
C220 1/50V
C203 4700p
R203 560
C202 4.7/50V
Q202 BA1A4M
R204 100k
RV5 1k
R205 3.6k (1%)
C204 47/16V
R202 22k
C205 2200p
C207 47/16V
C223 0.1
R206 100k
C206 100p
RF PLL FREQUENCY
SPD
-5V
C316
C217 47/16V
<D. -5V>

<A. -5V>
<A. GND>
<A. +5V>
<-9V>
<A. GND>
<+9V>
<A. +5V>
<A. GND>
<A. -5V>
<DFCT>
<TZC>
<TE>
<FE>
<GFS>
<WDCK>
<MON>
<MDP>
<FSW>
<EFM>
<ASY>
<LOCK>
<VCO>
<SENS>
<PDO>
<CLK>
<XLT>
<DATA>
<D. -5V>
<LD. ON>
<SCOR>

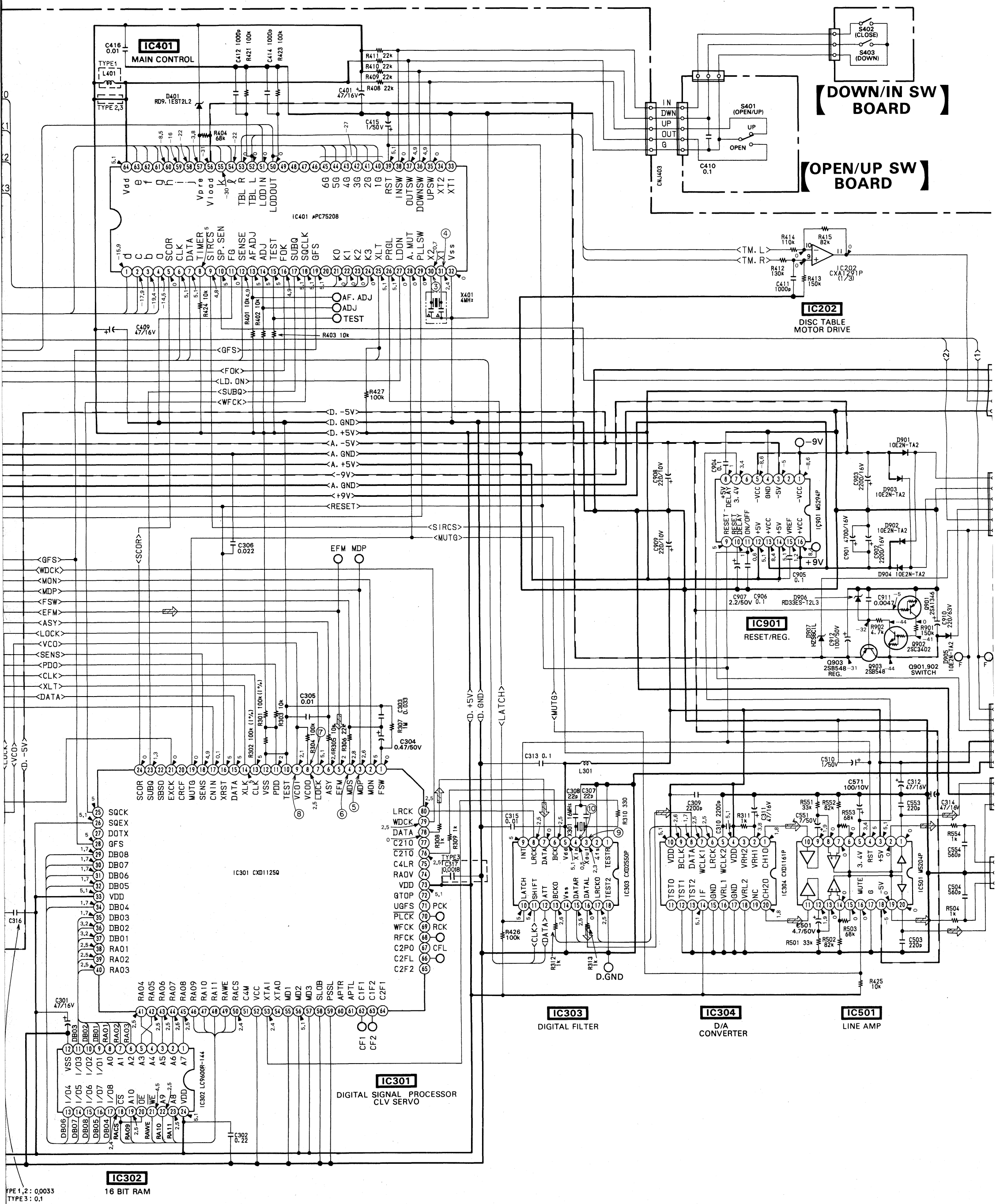
FES TRACKING GAIN
RV4 22k
C115 2200p
RV3 22k
R111 4.7k
TEI
C114 4700p
FOCUS GAIN
FEI
FEO
TEO
R109 15k
R110 4.7k
RV2 4.7k
FOCUS BIAS
R108 15k
C116 0.47/50V
ASY
R106 100k
R107 1k
C301 47/16V
TYPE 1,2 : 0.0033
TYPE 3 : 0.1

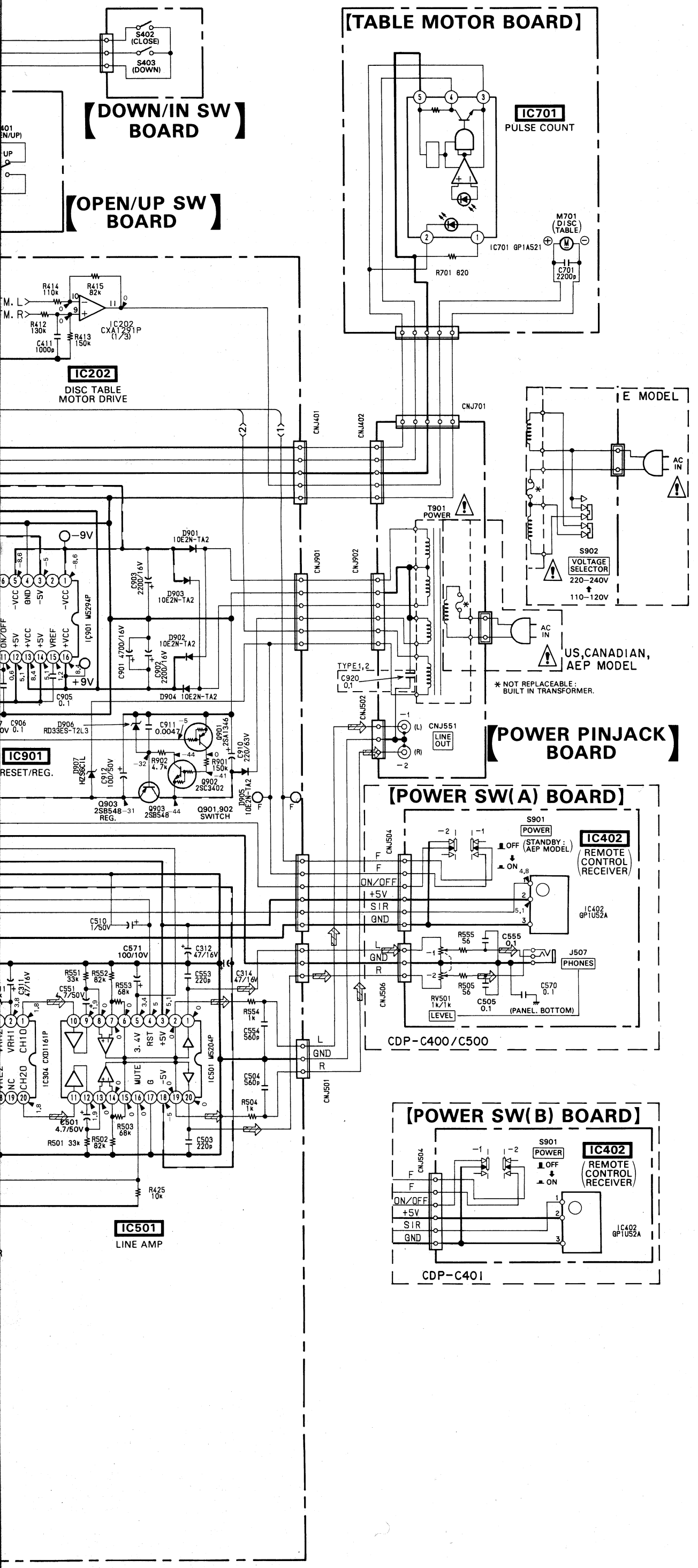
IO- IO+
Q101 LASER DRIVE
R102 100
Q101 2SB1013-2
R101 22
D101 US1060-TP
C103 1000p
C104 47/16V
R103 1k
C101A 15p
C102A 15p
C105 47/16V
C107 0.033
C112 47/16V
C113 0.1
E-F BALANCE
RV1 22k
R104 22k
CC2
VR
EI
EO
E
F
VC
B+D
A+C
PD
LD
P/N
RF-
RFO
RFI
CC1
VEE
BIAS
FE
TE
DFCT
MIRR
CP
CB
D. GND
ASY
EFM
FOK
LDON
VCC
C108 0.033
C109 0.01
C106 2200p
C111 47/16V
C110 0.33
RFG
RF
IC101 CXA1081S

IC101
RF AMP/SIGNAL PROCESSOR
LASER ON CIRCUIT

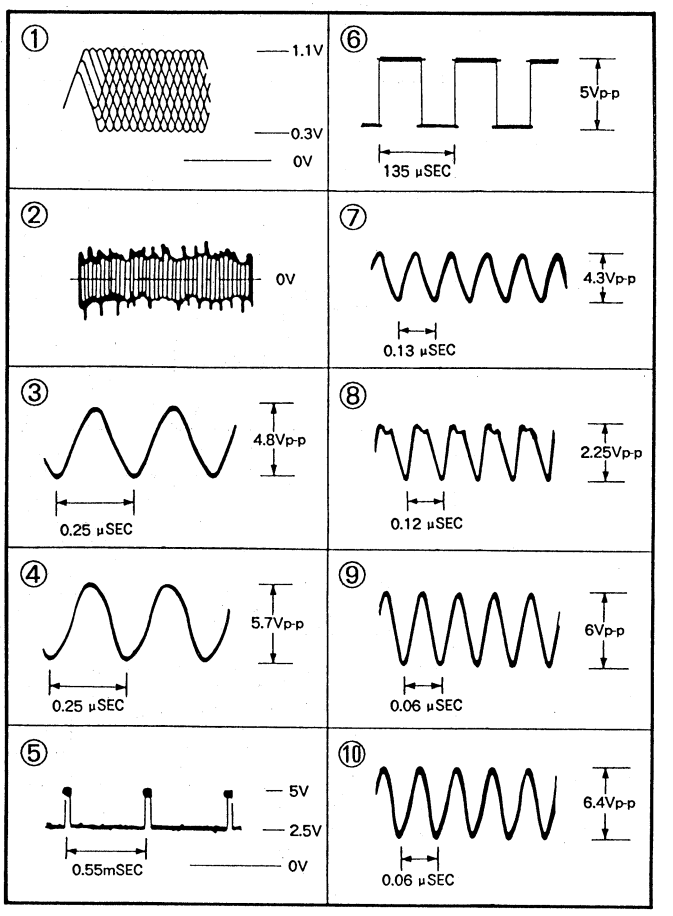
IC302
16 BIT RA

SQCK
SQEX
DOTX
GFS
DB08
DB07
DB06
DB05
DB04
DB03
DB02
DB01
RA01
RA02
RA03
VDD
VSS
I/O3
I/O2
I/O1
A0
A1
A2
I/O4
I/O5
I/O6
I/O7
I/O8
CS
A10
RACS
RA09


IC401
MAIN CONTROL
IC401 #PC75208
Vdd a b c d e f g h i j Vpre Vload K ℓ TBL R TBL L LODIN LODOUT 6G 5G 4G 3G 2G 1G RST INSW OUTSW DOWNSW UPSW XT2 XT1
d c b a SCOR CLK DATA TIMER SIRCS SP. SEN FG SENSE AFADJ ADJ TEST FOK SUBQ SQCLK GFS K0 K1 K2 K3 XLT PRGL LDON A. MUT PLLSW X2 X1 Vss
AF. ADJ
ADJ
TEST
X401 4MHz
C409 47/16V
R403 10k
<GFS>
<FOK>
<LD. ON>
<SUBQ>
<WFCK>
R427 100k
<D. -5V>
<D. GND>
<D. +5V>
<A. -5V>
<A. GND>
<A. +5V>
<-9V>
<A. GND>
<+9V>
<RESET>
<SIRCS>
<MUTG>
<SCOR>
C306 0.022
EFM MDP
<GFS>
<WDCK>
<MON>
<MDP>
<FSW>
<EFM>
<ASY>
<LOCK>
<VCO>
<SENS>
<PDO>
<CLK>
<XLT>
<DATA>
C305 0.01
C303 0.033
R307 1M
C304 0.47/50V
R301 100k (1%)
R302 100k (1%)
R303 10k
R304 100k
R305 10k
R306 22k
SCOR SUBQ SBSO EXCK CRCF MUTG SENS CNIN XRST DATA XLK CLK VSS PDD TEST VCOI VCOO LOCK ASY EFM MDS MDP MON FSW
SQCK SQEX DOTX GFS DB08 DB07 DB06 DB05 VDD DB04 DB03 DB02 DB01 RA01 RA02 RA03
LRCK WDCK DATA C2IO C2IO C4LR RAOV VDD GTOP UGFS PCK PLCK WFCK RCK RFCK C2PO CFL C2FL C2F2
R308 1k
R309 1k
TYPE 3 C317 0.0018
IC301 CXD1125Q
C316
C301 47/16V
RA04 RA05 RA06 RA07 RA08 RA09 RA10 RA11 RAWE RACS C4M VCC XTAI XTAO MD1 MD2 MD3 SLOB PSSL APTR APTL C1F1 C1F2 C2F1
CF1 CF2
VSS I/O3 I/O2 I/O1 A0 A1 A2 A3 A4 A5 A6 A7
I/O4 I/O5 I/O6 I/O7 I/O8 CS A10 OE WE A9 A8 VDD
DB06 DB07 DB08 DB05 DB04 RACS RA09 RAWE RA10 RA11
IC302 LC9600R-144
C302 0.22
IC301
DIGITAL SIGNAL PROCESSOR
CLV SERVO
IC302
16 BIT RAM
TYPE 1,2 : 0.0033
TYPE 3 : 0.1
<D. +5V>
<D. GND>
<LATCH>
<MUTG>
C313 0.1
L301
C308 22p
C307 22p
X301 16MHz
R310 330
C315 0.01
INT LRCK DATA BCK Vdd XTI XTO TEST LATCH SHIFT ATT BCKO Vss DATAR DATAL LRCKO TEST2
IC303 CXD2550P
R426 100k
<CLK>
<DATA>
R312 1k
R313 1k
D.GND
IC303
DIGITAL FILTER
C510 1/50V
C571 100/10V
C309 2200p
C310 2200p
R311 1k
C311 47/16V
VDD BCLK DATA WCLK1 LRCK WCLK2 VDD VRH2 VRH1 CH1D
TST0 TST1 TST2 IF GND VRL1 GND VRL2 NC CH2D
IC304 CXD1161P
R425 10k
IC304
D/A
CONVERTER
R551 33k
R552 82k
R553 68k
C551 7/50V
C312 47/16V
C314 47/16V
C553 220p
R554 1k
C554 560p
C504 560p
R504 1k
C501 4.7/50V
R501 33k
R502 82k
R503 68k
C503 220p
3.4V RST +5V MUTE G -5V
IC501 M5204P
IC501
LINE AMP
C904 0.1
-9V
RESET DELAY 3.4V +5V -VCC GND -5V -VCC
IC901 M5294P
RESET DELAY ON/OFF +5V +VCC +5V VREF +VCC
+9V
C905 0.1
C908 220/10V
C909 220/10V
C907 2.2/50V
C906 0.1
D906 RD33ES-T2L3
C911 0.0047
Q901 2SA1346
R902 4.7k
R901 150k
Q902 2SC3402
C912 100/50V
D907 HZS6C1L
Q903 2SB548 REG.
Q903 2SB548
Q901,902 SWITCH
C910 220/63V
D905 10E2N-TA2
D901 10E2N-TA2
D903 10E2N-TA2
D902 10E2N-TA2
D904 10E2N-TA2
C903 2200/16V
C901 4700/16V
C902 2200/16V
IC901
RESET/REG.
R414 110k
R415 82k
R412 130k
R413 150k
C411 1000p
IC202 CXA1291P (1/3)
<TM. L>
<TM. R>
IC202
DISC TABLE
MOTOR DRIVE
S402 (CLOSE)
S403 (DOWN)
[DOWN/IN SW BOARD]
IN DWN UP OUT G
CNJ403
S401 (OPEN/UP)
UP
OPEN
C410 0.1
[OPEN/UP SW BOARD]
C401 47/16V
C412 1000p
R421 100k
C414 1000p
R423 100k
R411 22k
R410 22k
R409 22k
R408 22k
C415 1/50V
D401 RD9.1EST2L2
R404 68k
C416 0.01
TYPE1 L401
TYPE 2,3



- **Waveforms**

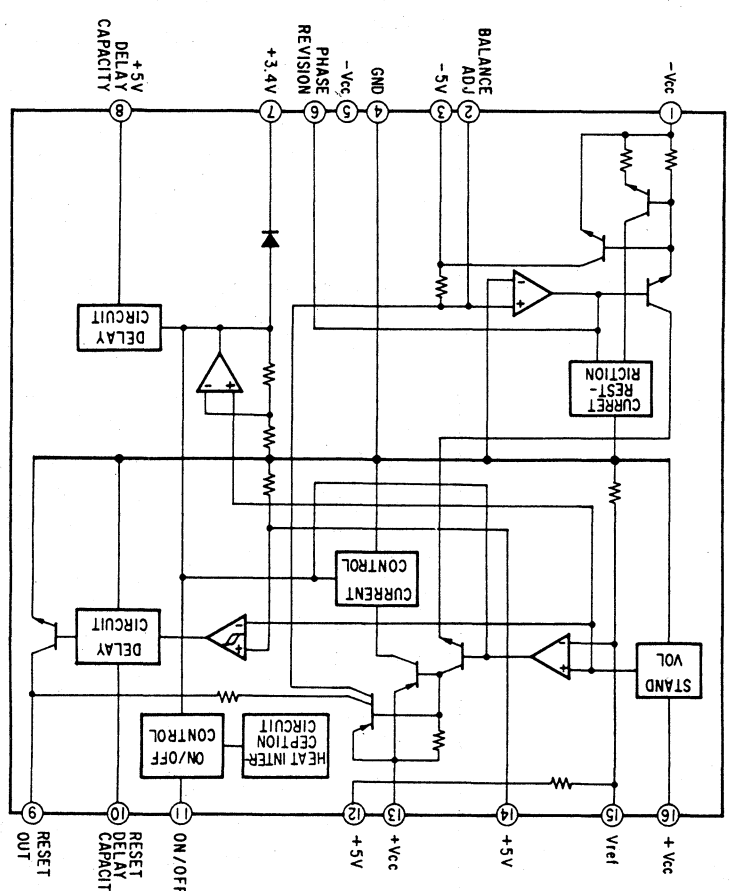


Note:

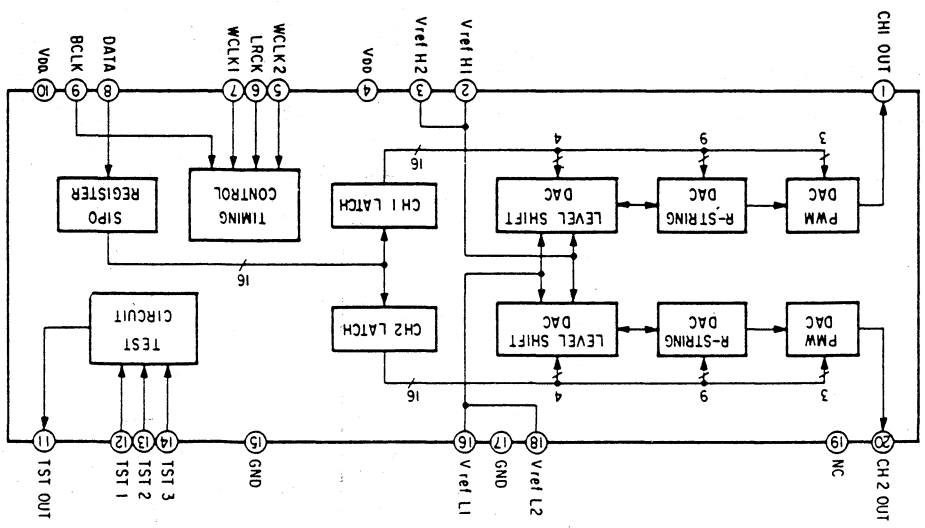
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ▬▬ : B+ Line
- ▬ ▬ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (input inpedance 1 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

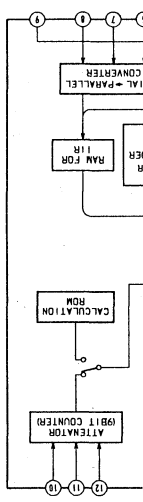
	Suffix of Main Board Part No.	L401	Remark
TYPE 1	-11	Used	CDP-C400/C500 US model only
TYPE 2	-11	Not used	
TYPE 3	-12	Not used	



IC901 M5294P



IC304 CXD1161P-2



4-3. SEMICONDUCTOR LEAD LAYOUTS

CXD1125Q

DTA114ES
DTA124ES
DTA144ES
DTC114ES
DTC124ES

GP1A521

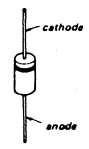
BA1L4M
2SA1175

2SB548

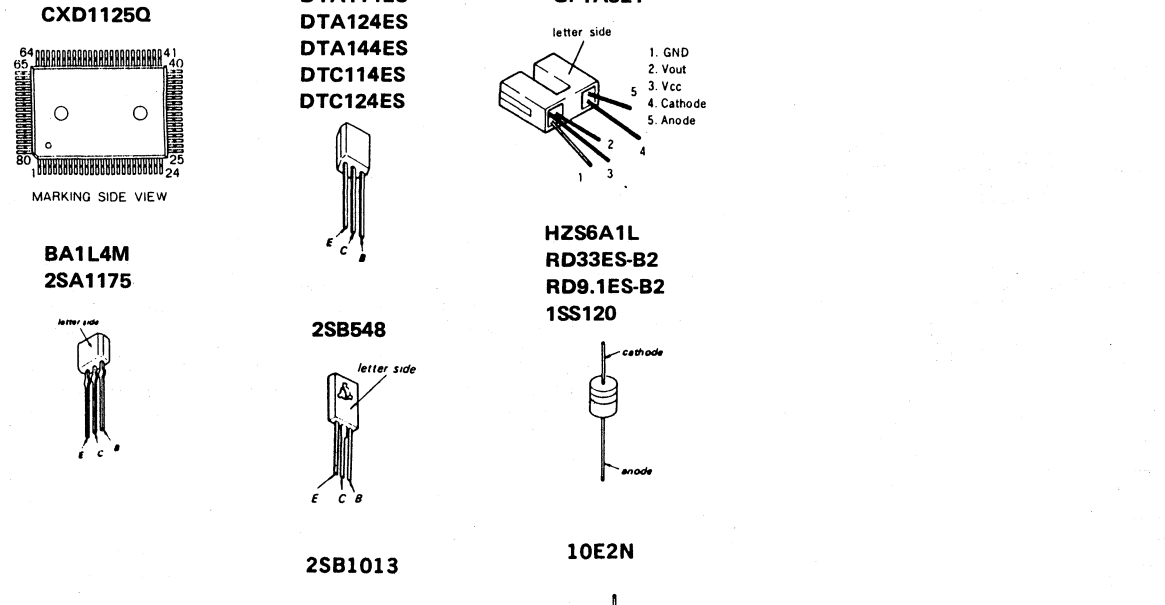
HZS6A1L
RD33ES-B2
RD9.1ES-B2
1SS120

2SB1013

10E2N



4-4. CIRCUIT BOARDS LOCATION

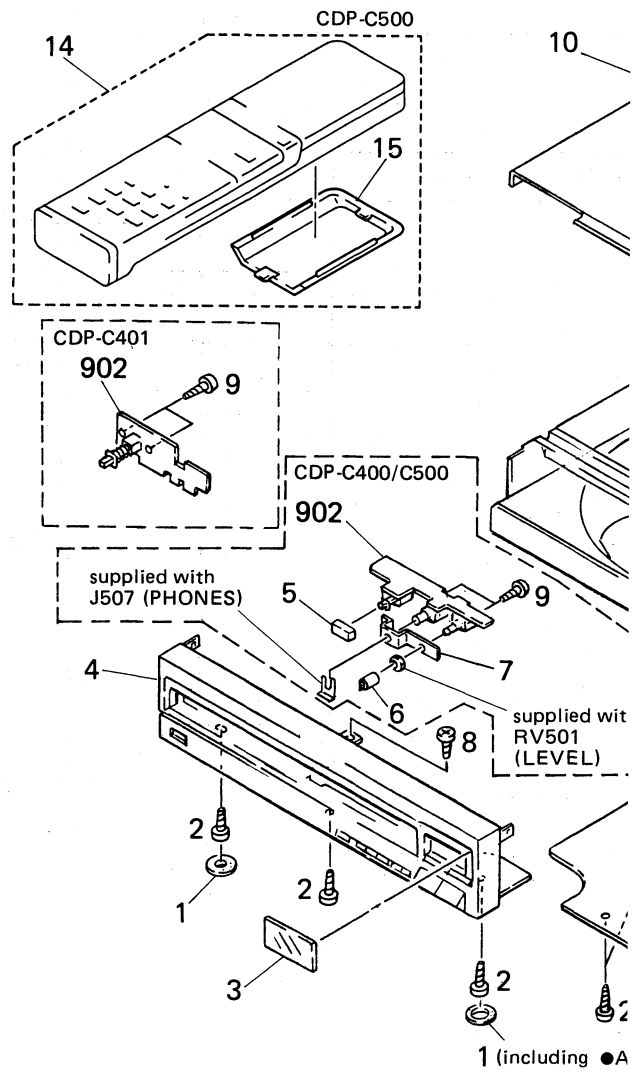


SECT
EXPLODE

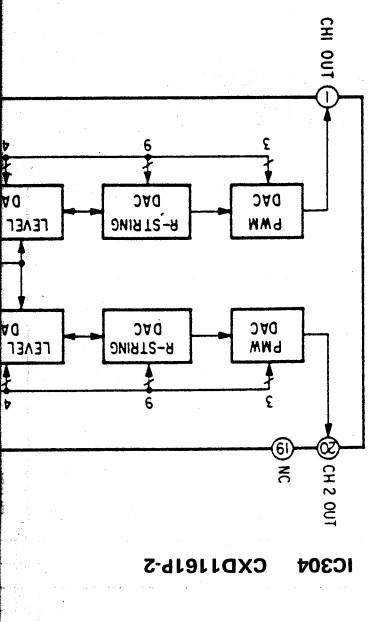
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standard number suffix -1 ferent from the components used
- Color Indicatio Example:
  (RED) . . . KNO
  ↑
  Cabinet's Colo

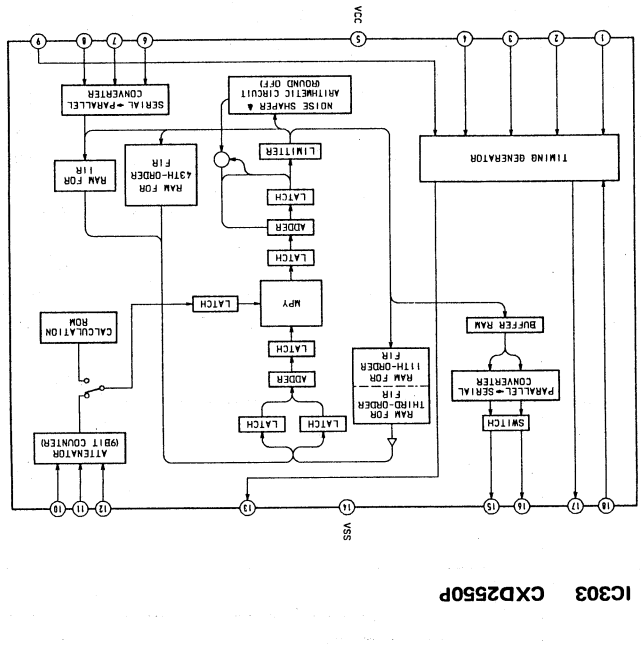
5-1. FRONT PANEL ASSEMBLY AND COVERS



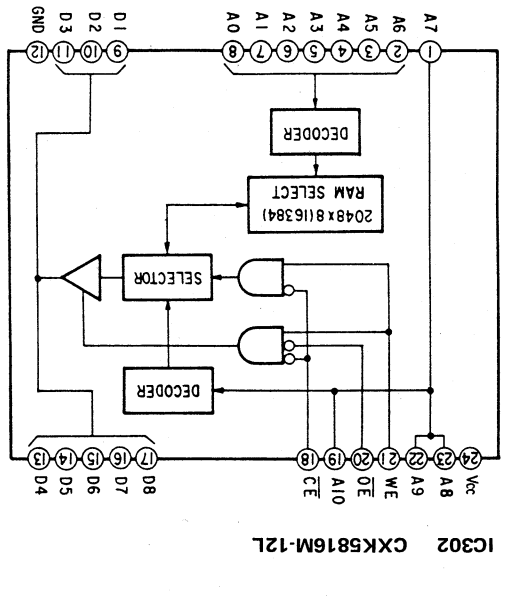
No.	Part No.	Description	Remarks
1	4-926-391-01	FOOT (FELT)	
2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
3	4-926-392-01	PLATE, INDICATION	
4	X-4924-433-1	(C500:US,Canadian)...PANEL ASSY, FRONT	
	X-4924-434-1	(C500:AEP,E).....PANEL ASSY, FRONT	
	X-4924-436-1	(C401).....PANEL ASSY, FRONT	
	X-4924-437-1	(C400).....PANEL ASSY, FRONT	
5	4-922-921-01	BUTTON (POWER)	
6	4-922-531-11	(C400,C500)...KNOB (A TYPE), LOV	
7	*4-926-390-01	(C400,C500)...BRACKET (HEADPHONE)	
8	7-685-245-11	SCREW +KTP 3X6 TYPE2 NON-SLIT	



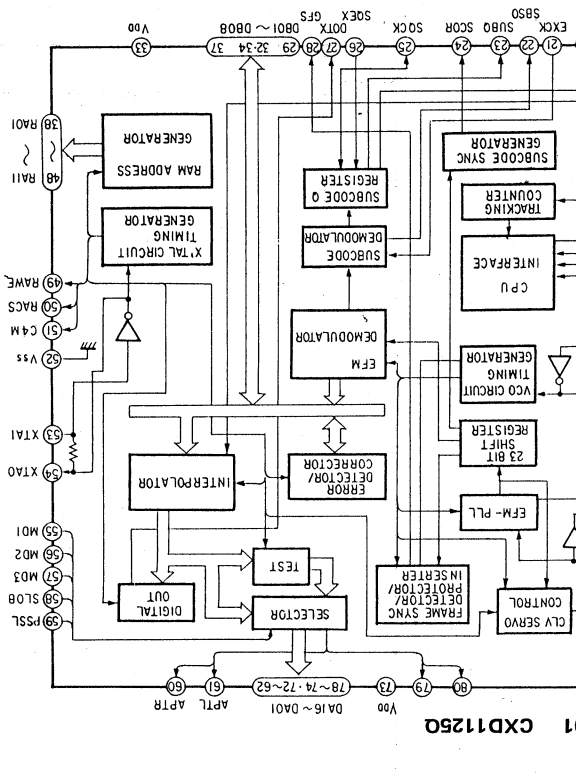
IC304 CXD1161P-2



IC303 CXD2550P



IC302 CXK5816M-12L



IC301 CXD1125Q

SECTION 5
EXPLODED VIEWS

mechanical parts with no reference
ber in the exploded views are not
ied.

construction parts of an assembled
are indicated with a collation num-
the remark column.

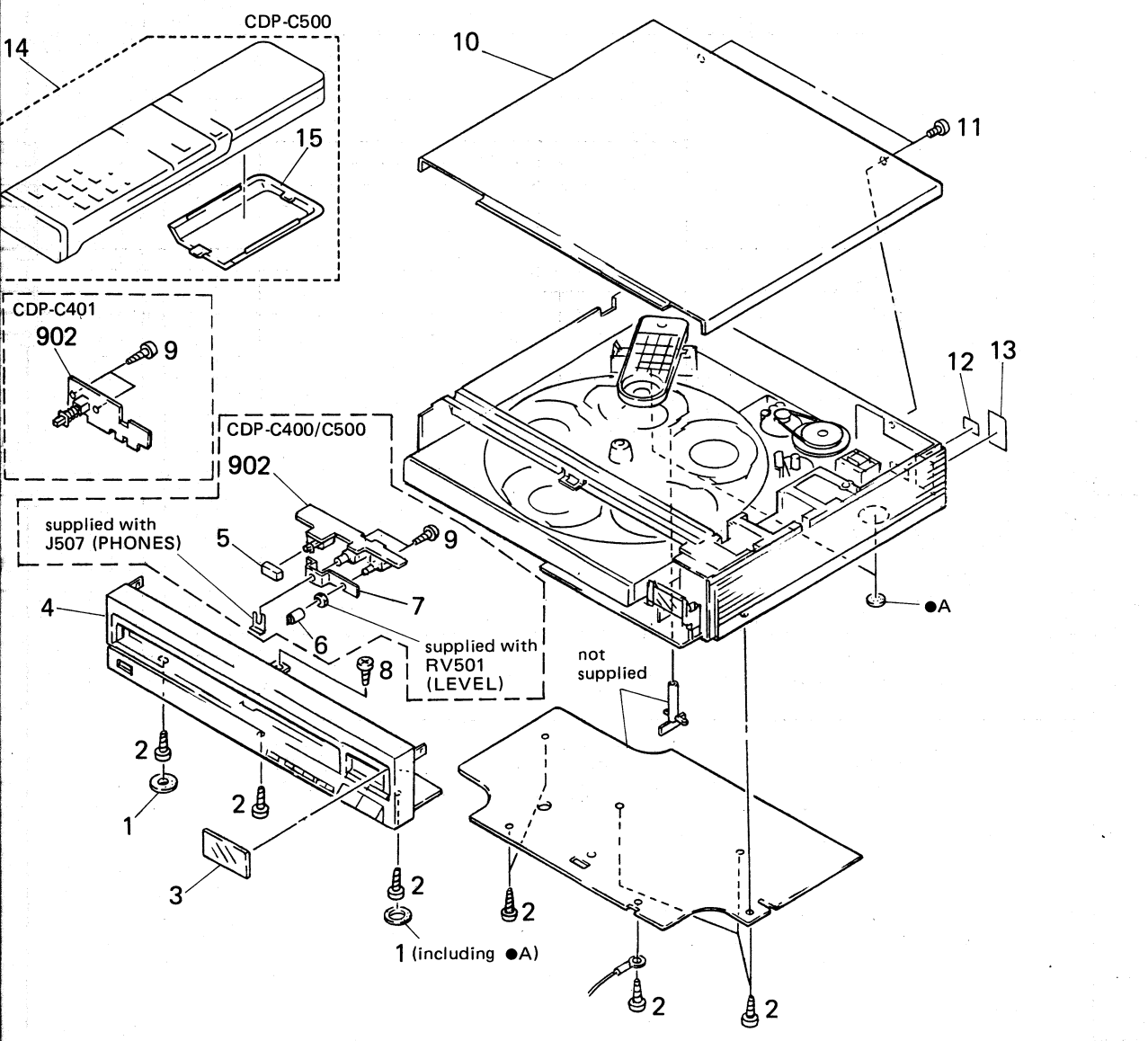
marked "★" are not stocked since
are seldom required for routine
e. Some delay should be antici-
when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

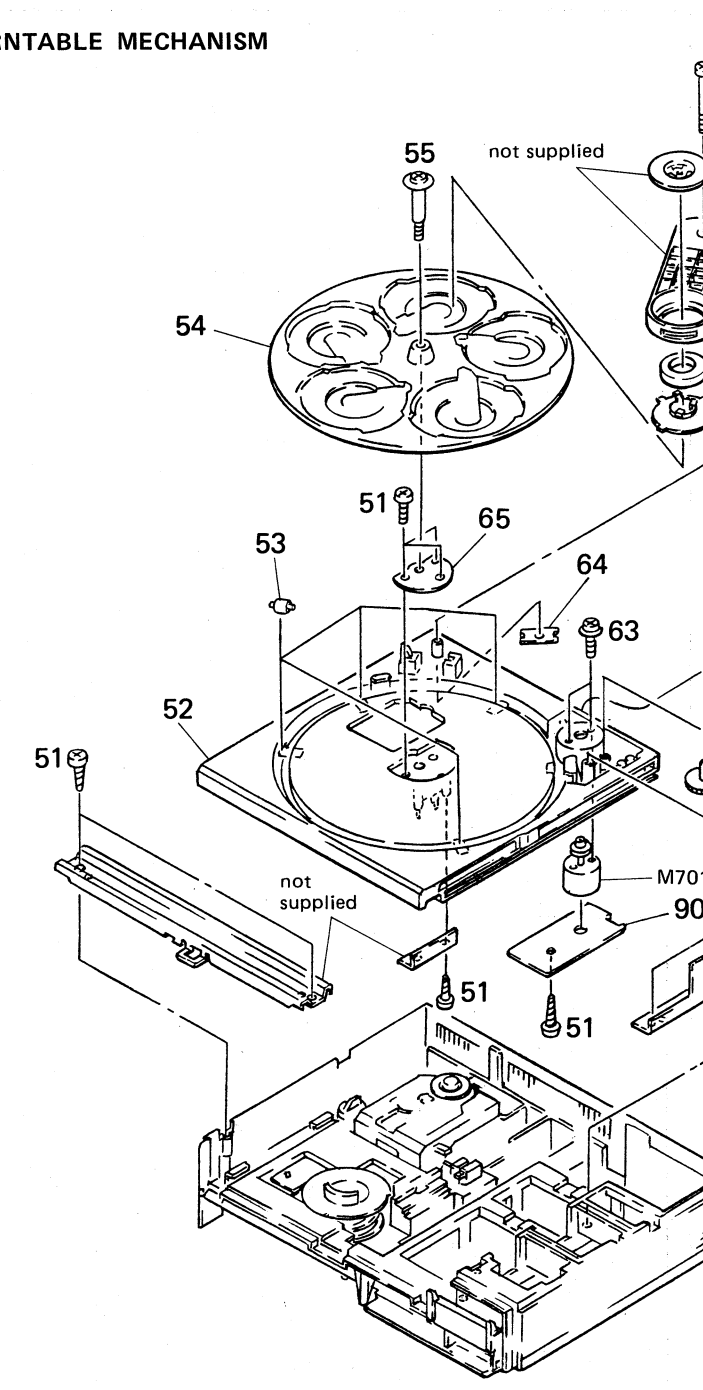
FRONT PANEL ASSEMBLY AND COVERS



Part No.	Description	Remarks
4-926-391-01	FOOT (FELT)	
7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
4-926-392-01	PLATE, INDICATION	
X-4924-433-1	(C500:US,Canadian)...PANEL ASSY, FRONT	
X-4924-434-1	(C500:AEP,E).....PANEL ASSY, FRONT	
X-4924-436-1	(C401).....PANEL ASSY, FRONT	
X-4924-437-1	(C400).....PANEL ASSY, FRONT	
4-922-921-01	BUTTON (POWER)	
4-922-531-11	(C400,C500)...KNOB (A TYPE), LOV	
4-926-390-01	(C400,C500)...BRACKET (HEADPHONE)	
7-685-245-11	SCREW +KTP 3X6 TYPE2 NON-SLIT	

No.	Part No.	Description	Remarks
9	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
10	4-930-503-01	CASE	
11	7-685-650-79	SCREW (2), TAPPING	
12	*4-885-838-00	(AEP,E)...LABEL, CLASS 1	
13	*3-704-217-01	(US).....LABEL	
14	1-465-186-11	(C500)...REMOTE COMMANDER RM-D505	15
15	4-384-285-01	(C500)...COVER, BATTERY	
902	*1-630-747-11	(C401).....PC BOARD, POWER SWITCH (B)	
	*1-630-748-11	(C400,C500)...PC BOARD, POWER SWITCH (A)	

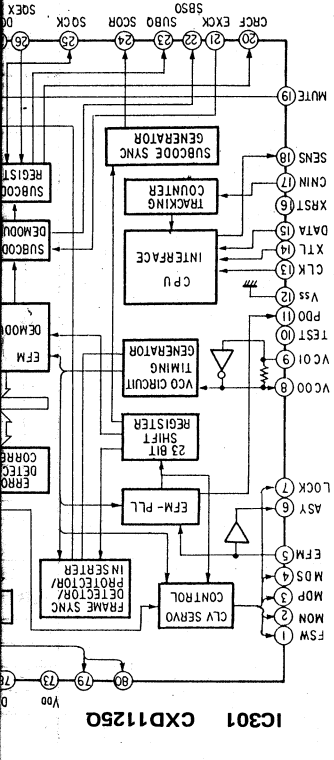
5-2. TURNTABLE MECHANISM

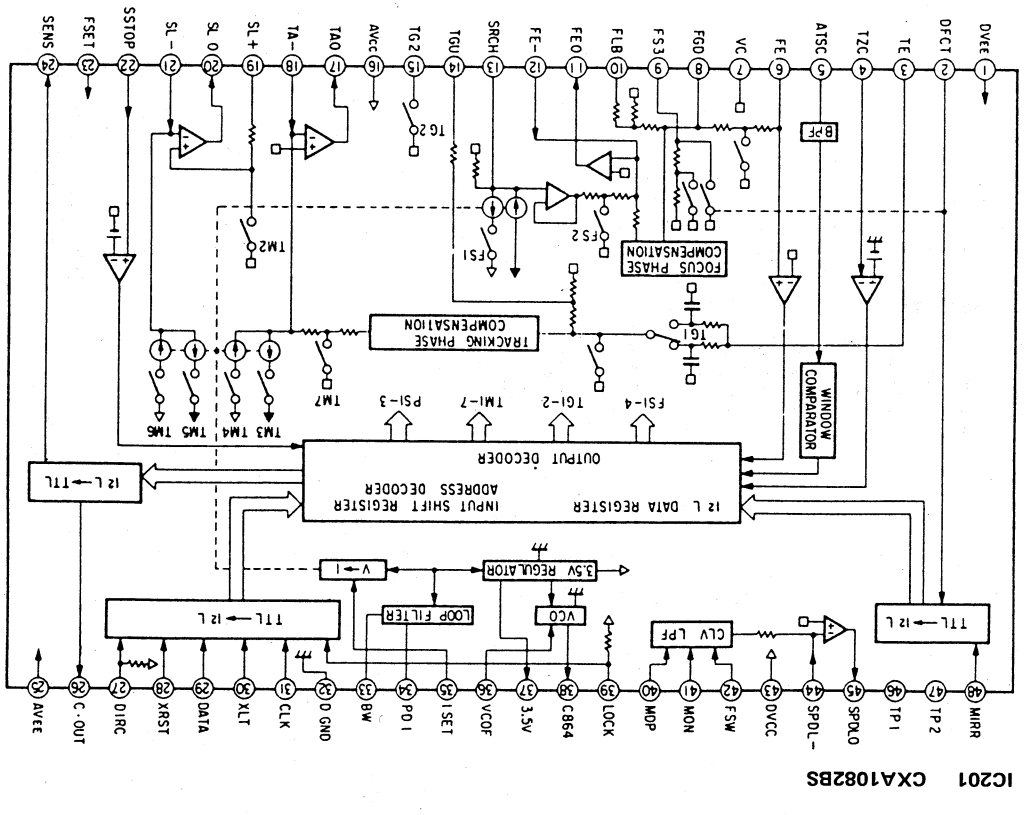


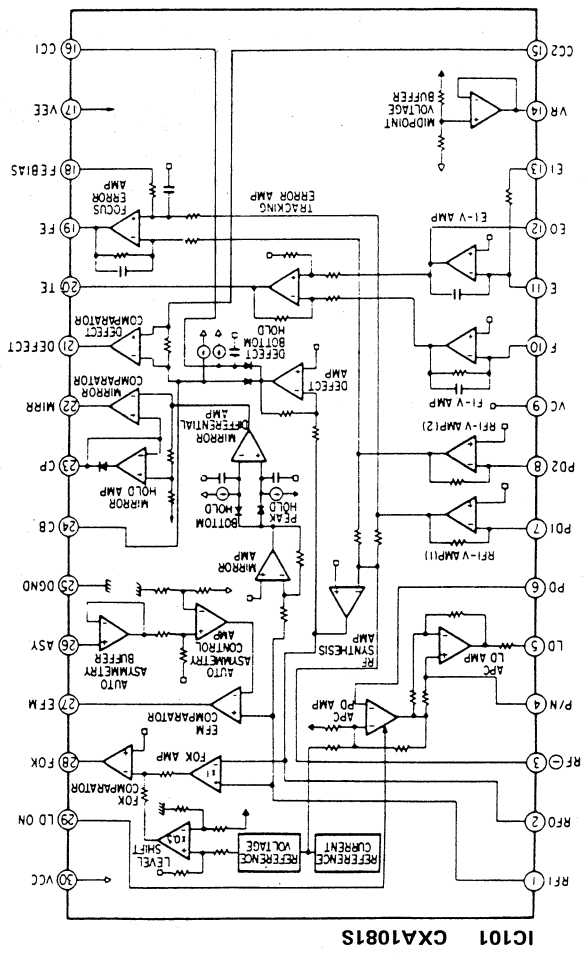
No.	Part No.	Description	Remarks
51	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
52	*4-926-381-01	TABLE (A), DISK	
53	*X-4924-409-1	SHAFT (ROLLER B) ASSY	
54	*4-926-383-01	TABLE (B), DISK	
55	4-926-384-01	SCREW, STEP	
56	7-682-554-09	SCREW +B 3X25	
57	4-926-395-01	SPRING, COMPRESSION	
58	4-921-022-01	PULLEY, CHUCKING	
59	4-926-399-01	BELT	

No.	Part No.
60	7-685-152
61	4-926-385
62	4-926-386
63	7-628-254
64	*4-926-388
65	*4-926-387
904	*1-630-750
908	1-452-340

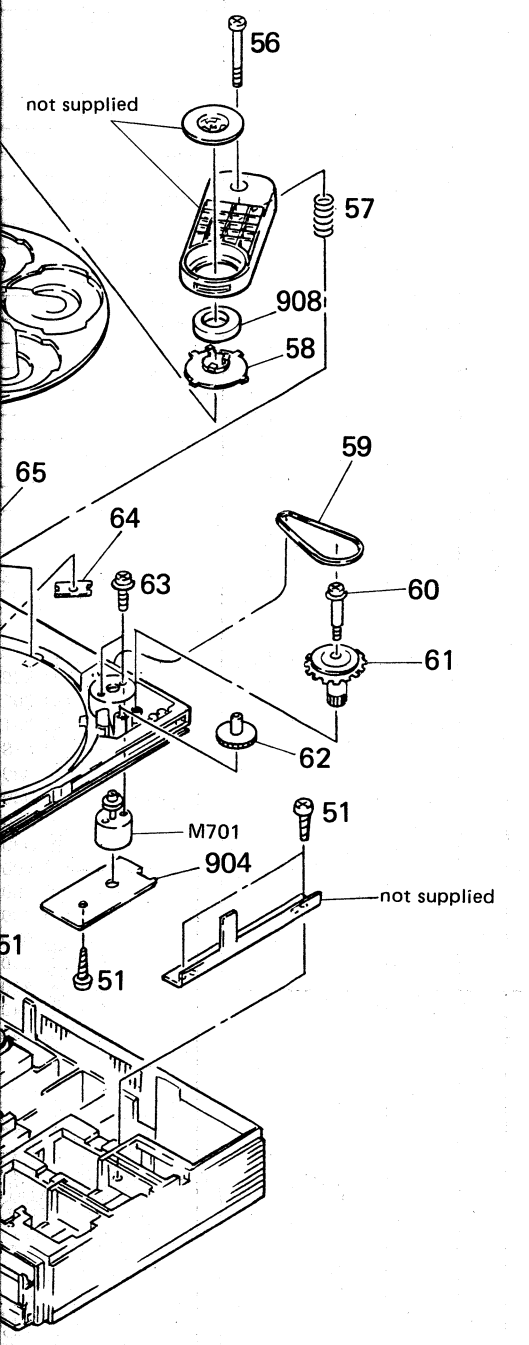
4-5. IC BLOCK DIAGRAMS

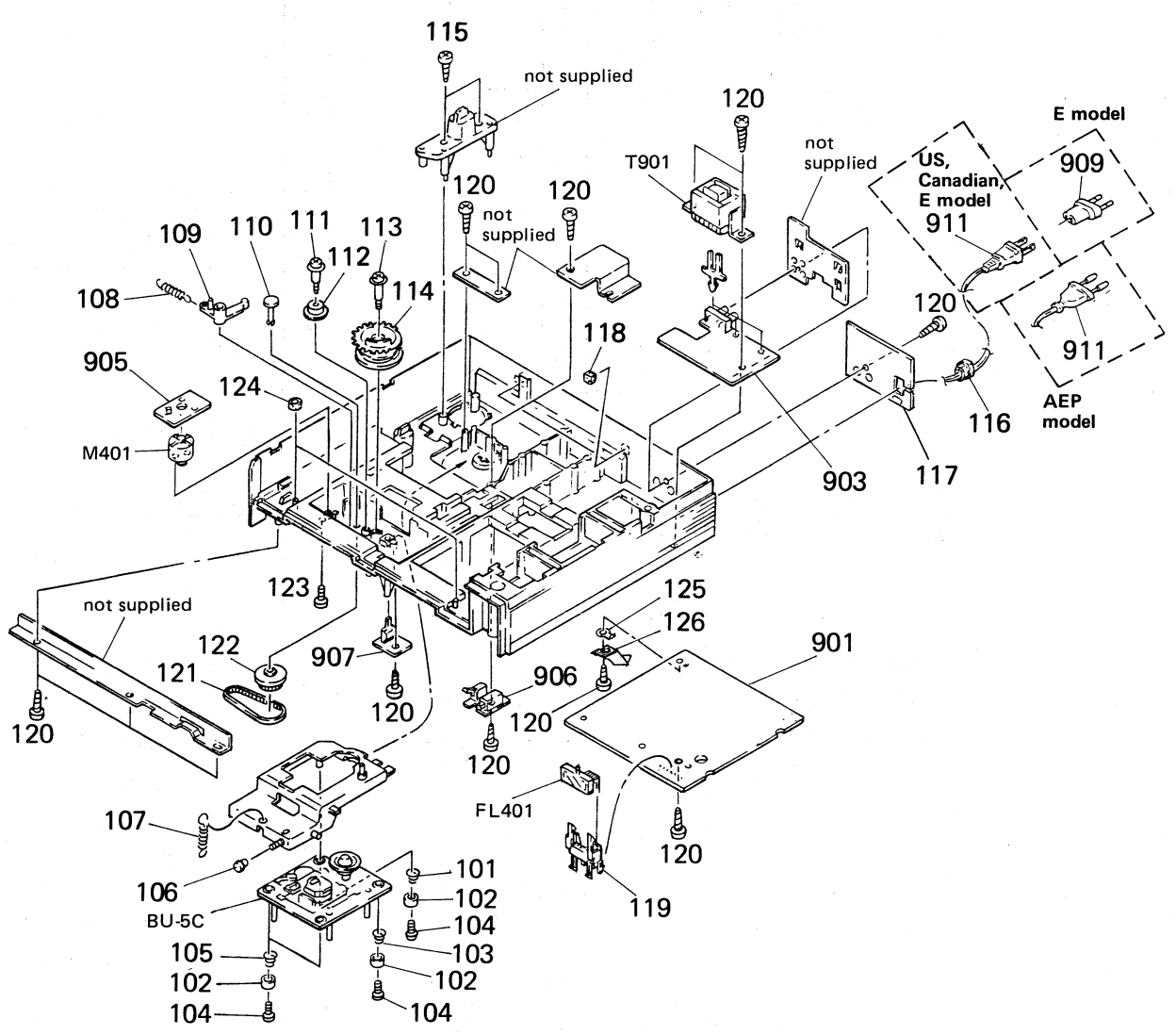






5-3. CHASSIS



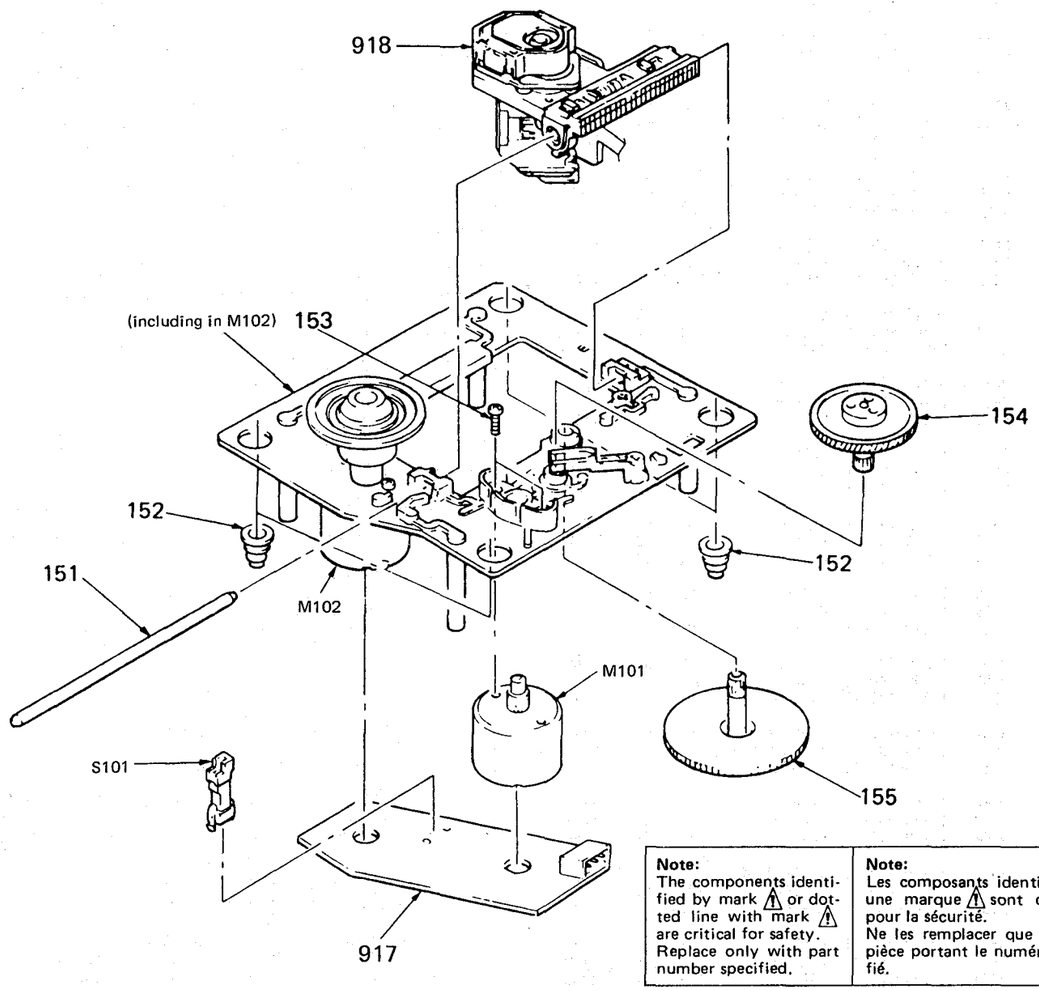


No.	Part No.	Description	Remarks
60	7-685-152-19	SCREW, STEP	
61	4-926-385-01	GEAR (C)	
62	4-926-386-01	GEAR (B)	
63	7-628-254-00	+PSW, 2.6X5	
64	*4-926-388-01	BRACKET (ADJUSTMENT)	
65	*4-926-387-01	BRACKET (CENTER SHAFT)	
904	*1-630-750-11	PC BOARD, TABLE MOTOR	
908	1-452-340-21	MAGNET	

No.	Part No.	Description	Remarks
101	4-917-541-01	SPRING (B)	
102	4-917-508-01	HOLDER, SP	
103	4-918-669-01	SPRING (W)	
104	7-685-135-19	SCREW +P 2.6X10 TYPE2 NON-SLIT	
105	4-917-507-01	SPRING (H)	
106	4-927-631-01	ROLLER (L)	
107	4-926-394-01	SPRING, TENSION	
108	4-924-412-01	SPRING (B), TENSION	
109	4-917-519-01	LEVER, SET	
110	4-924-425-01	GEAR (LOADING B)	
111	4-926-320-01	SCREW (B), STEP	
112	4-924-426-01	GEAR (LOADING C)	
113	7-685-666-79	SCREW, STEP	
114	4-930-508-01	GEAR (LOADING A)	
115	7-685-648-79	SCREW +BVTT 3X12 TYPE2 N-S	
116	3-703-244-00	(US,Canadian,AEP)...BUSHING (2104), CORD	
	3-703-571-11	(E).....BUSHING (S) (4516), CORD	
117	*4-926-360-01	(C500:E)...PLATE(BACK PANEL), INDICATION	
	*4-926-361-01	(C400).....PLATE(BACK PANEL), INDICATION	
	*4-926-362-01	(C500:Canadian) ...PLATE(BACK PANEL), INDICATION	
	*4-926-363-01	(C500:AEP)..PLATE(BACK PANEL), INDICATION	
	*4-926-364-01	(C500:US)...PLATE(BACK PANEL), INDICATION	
	*4-926-365-01	(C401).....PLATE(BACK PANEL), INDICATION	

No.	Part No.	Description	Remarks
119	*4-926-396-01	HOLDER (FL)	
120	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
121	4-924-478-01	BELT (TIMING)	
122	4-930-507-01	PULLEY (LOADING)	
123	7-628-254-00	+PSW, 2.6X5	
124	*4-930-520-01	CUSHION	
125	4-870-539-00	PLATE, GROUND	
126	*4-930-512-01	PLATE, GROUND	
901	*A-4617-091-A	(C400,C500)...MOUNTED PCB, MAIN	
	*A-4617-141-A	(C401).....MOUNTED PCB, MAIN	
903	*1-630-749-11	PC BOARD, POWER	
905	*1-630-751-11	PC BOARD, LOADING MOTOR	
906	*1-630-752-11	PC BOARD, DOWN-IN SW	
907	*1-630-753-11	PC BOARD, OPEN-UP SW	
909	⚠ .1-526-565-00	(E).....AC PLUG ADAPTOR	
910	*1-535-688-11	TERMINAL	
911	⚠ .1-551-188-XX	(E).....CORD, POWER	
	⚠ .1-551-478-00	(US,Canadian)...CORD, POWER	
	⚠ .1-555-795-00	(AEP).....CORD, POWER, EURO PLUG	
M401	A-4604-228-A	MOTOR ASSY, LOADING	
M701	A-4604-232-A	MOTOR ASSY, ROTARY	
T901	⚠ .1-449-024-11	(US,Canadian)...TRANSFORMER, POWER	
T901	⚠ .1-449-025-11	(AEP).....TRANSFORMER, POWER	
T901	⚠ .1-449-026-11	(E).....TRANSFORMER, POWER	

5-4. OPTICAL PICK-UP BLOCK (BU-5C)



Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	Remarks
151	4-917-565-01	SHAFT, SLED	
152	4-917-562-01	INSULATOR	
153	7-621-255-15	SCREW +P 2X3	
154	4-917-567-01	GEAR (M)	
155	4-917-564-01	GEAR (P), FLATNESS	

Ref.No	Part No.	Description	Remarks
917	*1-626-304-11	PC BOARD, SL/SP MOTOR	
918	⚠8-848-062-01	DEVICE, OPTICAL	
M101	X-4917-504-1	ASSY, MOTER (SLED)	
M102	X-4917-523-1	ASSY, MOTER (SPINDLE)	
S101	1-571-274-11	SWITCH, LEAF (LIMIT IN)	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			
901	*A-4617-091-A	(C400,C500)...MOUNTED PCB, MAIN			
	*A-4617-141-A	(C401).....MOUNTED PCB, MAIN			
902	*1-630-747-11	(C401).....PC BOARD, POWER SWITCH(B)			
	*1-630-748-11	(C400,C500)...PC BOARD, POWER SWITCH(A)			
903	*1-630-749-11	PC BOARD, POWER			
904	*1-630-750-11	PC BOARD, TABLE MOTOR			
905	*1-630-751-11	PC BOARD, LOADING MOTOR			
906	*1-630-752-11	PC BOARD, DOWN-IN SW			
907	*1-630-753-11	PC BOARD, OPEN-UP SW			
908	1-452-340-21	MAGNET			
909	⚠1-526-565-00	(E)...AC PLUG ADAPTOR			
910	*1-535-688-11	TERMINAL			
911	⚠1-551-188-XX	(E).....CORD, POWER			
	⚠1-551-478-00	(US,Canadian)...CORD, POWER			
	⚠1-555-795-00	(AEP).....CORD, POWER, EURO PLUG			
917	*1-626-304-11	PC BOARD, SL/SP MOTOR			
918	⚠8-848-062-01	DEVICE, OPTICAL KSS-150A (H)			
C101A	1-162-203-31	CERAMIC	15PF	5%	50V
C101B	1-233-171-11	COMPOSITION CIRCUIT BLOCK			
C102A	1-162-203-31	CERAMIC	15PF	5%	50V
C102B	1-233-171-11	COMPOSITION CIRCUIT BLOCK			
C103	1-162-294-31	CERAMIC	0.001MF	10%	50V
C104	1-124-477-11	ELECT	47MF	20%	16V
C105	1-124-477-11	ELECT	47MF	20%	16V
C106	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C107	1-136-159-00	FILM	0.033MF	5%	50V
C108	1-136-153-00	FILM	0.01MF	5%	50V
C109	1-136-153-00	FILM	0.01MF	5%	50V
C110	1-136-171-00	FILM	0.33MF	5%	50V
C111	1-124-477-11	ELECT	47MF	20%	16V
C112	1-124-477-11	ELECT	47MF	20%	16V
C113	1-136-165-00	FILM	0.1MF	5%	50V
C114	1-161-377-00	CERAMIC	0.0047MF	20%	16V
C115	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C116	1-124-902-00	ELECT	0.47MF	20%	50V
C202	1-124-927-11	ELECT	4.7MF	20%	50V
C203	1-161-377-00	CERAMIC	0.0047MF	20%	16V
C204	1-124-477-11	ELECT	47MF	20%	16V
C205	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C206	1-162-282-31	CERAMIC	100PF	10%	50V
C207	1-124-477-11	ELECT	47MF	20%	16V
C208	1-161-379-00	CERAMIC	0.01MF	20%	16V
C209	1-136-165-00	FILM	0.1MF	5%	50V
C210	1-123-875-11	ELECT	10MF	20%	50V
C211	1-136-165-00	FILM	0.1MF	5%	50V

Ref.No.	Part No.	Description			
C212	1-123-382-00	ELECT	3.3MF	20%	50V
C213	1-136-159-00	FILM	0.033MF	5%	50V
C214	1-136-165-00	FILM	0.1MF	5%	50V
C215	1-162-291-31	CERAMIC	560PF	10%	50V
C216	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C217	1-124-477-11	ELECT	47MF	20%	16V
C218	1-124-477-11	ELECT	47MF	20%	16V
C219	1-124-477-11	ELECT	47MF	20%	16V
C220	1-124-499-11	ELECT	1MF	20%	50V
C221	1-124-499-11	ELECT	1MF	20%	50V
C222	1-124-499-11	ELECT	1MF	20%	50V
C223	1-136-165-00	FILM	0.1MF	5%	50V
C301	1-124-477-11	ELECT	47MF	20%	16V
C302	1-136-169-00	FILM	0.22MF	5%	50V
C303	1-136-159-00	FILM	0.033MF	5%	50V
C304	1-124-902-00	ELECT	0.47MF	20%	50V
C305	1-161-379-00	CERAMIC	0.01MF	20%	16V
C306	1-161-494-00	CERAMIC	0.022MF		25V
C307	1-162-207-31	CERAMIC	22PF	5%	50V
C308	1-162-207-31	CERAMIC	22PF	5%	50V
C309	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C310	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C311	1-124-477-11	ELECT	47MF	20%	16V
C312	1-124-477-11	ELECT	47MF	20%	16V
C313	1-136-165-00	FILM	0.1MF	5%	50V
C314	1-124-477-11	ELECT	47MF	20%	16V
C315	1-136-153-00	FILM	0.01MF	5%	50V
C316	1-130-477-00	(TYPE 1,2)...FILM 0.0033MF		5%	50V
C316	1-136-165-00	(TYPE 3).....FILM 0.1MF		5%	50V
C317	1-130-474-00	(TYPE 3).....MYLAR 0.0018MF		5%	50V
C401	1-124-477-11	ELECT	47MF	20%	16V
C406	1-164-159-11	CERAMIC	0.1MF		50V
C407	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C408	1-164-159-11	CERAMIC	0.1MF		50V
C409	1-124-477-11	ELECT	47MF	20%	16V
C410	1-164-159-11	CERAMIC	0.1MF		50V
C411	1-162-294-31	CERAMIC	0.001MF	10%	50V
C412	1-162-294-31	CERAMIC	0.001MF	10%	50V
C413	1-162-294-31	CERAMIC	0.001MF	10%	50V
C414	1-162-294-31	CERAMIC	0.001MF	10%	50V
C415	1-124-499-11	ELECT	1MF	20%	50V
C416	1-136-153-00	FILM	0.01MF	5%	50V
C501	1-124-927-11	ELECT	4.7MF	20%	50V
C503	1-162-286-31	CERAMIC	220PF	10%	50V
C504	1-162-291-31	CERAMIC	560PF	10%	50V
C505	1-164-159-11	(C400,C500)..CERAMIC	0.1MF		50V
C510	1-124-499-11	ELECT	1MF	20%	50V

	Suffix of Main Board Part No.	L401	Remark
TYPE 1	-11	Used	CDP-C400/C500 US model only
TYPE 2	-11	Not used	
TYPE 3	-12	Not used	

Ref.No.	Part No.	Description			
C551	1-124-927-11	ELECT	4.7MF	20%	50V
C553	1-162-286-31	CERAMIC	220PF	10%	50V
C554	1-162-291-31	CERAMIC	560PF	10%	50V
C555	1-164-159-11	(C400,C500)...CERAMIC	0.1MF		50V
C570	1-136-165-00	(C400,C500)...FILM	0.1MF	5%	50V
C571	1-124-443-00	ELECT	100MF	20%	10V
C701	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C901	1-124-898-11	ELECT	4700MF	20%	16V
C902	1-124-556-11	ELECT	2200MF	20%	16V
C903	1-124-556-11	ELECT	2200MF	20%	16V
C904	1-136-165-00	FILM	0.1MF	5%	50V
C905	1-136-165-00	FILM	0.1MF	5%	50V
C906	1-136-165-00	FILM	0.1MF	5%	50V
C907	1-124-925-11	ELECT	2.2MF	20%	50V
C908	1-126-176-11	ELECT	220MF	20%	10V
C909	1-126-176-11	ELECT	220MF	20%	10V
C910	1-124-919-11	ELECT	220MF	20%	63V
C911	1-130-479-00	MYLAR	0.0047MF	5%	50V
C912	1-124-122-11	ELECT	100MF	20%	50V
C920	1-164-159-11	(TYPE 1,2)...CERAMIC	0.1MF		50V
CNJ101*	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CNJ103*	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CNJ201*	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNJ401*	1-564-339-00	PIN, CONNECTOR 5P			
CNJ402*	1-564-339-00	PIN, CONNECTOR 5P			
CNJ403*	1-564-339-00	PIN, CONNECTOR 5P			
CNJ407*	1-564-336-00	PIN, CONNECTOR 2P			
CNJ501*	1-564-338-00	PIN, CONNECTOR 4P			
CNJ502*	1-564-338-00	PIN, CONNECTOR 4P			
CNJ504*	1-564-499-11	PIN, CONNECTOR 6P			
CNJ506*	1-564-496-11	(C400,C500)...PIN, CONNECTOR 3P			
CNJ551	1-566-921-11	JACK, PIN 2P (LINE OUT)			
CNJ701*	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CNJ901*	1-564-509-11	PLUG, CONNECTOR 6P			
CNJ902*	1-564-509-11	PLUG, CONNECTOR 6P			
D101	8-719-912-20	DIODE 1SS120			
D401	8-719-110-13	DIODE RD9.1ES-B2			
D402	8-719-912-20	DIODE 1SS120			
D403	8-719-912-20	DIODE 1SS120			
D404	8-719-912-20	DIODE 1SS120			
D901	8-719-200-77	DIODE 10E2N			
D902	8-719-200-77	DIODE 10E2N			
D903	8-719-200-77	DIODE 10E2N			
D904	8-719-200-77	DIODE 10E2N			
D905	8-719-200-77	DIODE 10E2N			
D906	8-719-110-78	DIODE RD33ES-B2			
D907	8-719-933-33	DIODE HZS6A1L			
FL401	1-519-506-11	INDICATOR TUBE, FLUORESCENT			
IC101	8-752-034-00	IC CXA1081S			
IC201	8-752-032-30	IC CXA1082BS			
IC202	8-759-035-28	IC CXA-1291P			
IC203	8-759-035-28	IC CXA-1291P			
IC301	8-752-328-62	IC CXD1125Q			
IC302	8-752-323-64	IC CXK5816M-12L			
IC303	8-752-328-72	IC CXD2550P			
IC304	8-759-805-35	IC CXD1161P-2			
IC401	8-759-145-82	IC UPD75208CW-287			

	Suffix of Main Board Part No.	L401	Remark
TYPE 1	-11	Used	CDP-C400/C500 US model only
TYPE 2	-11	Not used	
TYPE 3	-12	Not used	

Ref.No.	Part No.	Description			
IC402	8-749-920-53	(C400,C500) ...RECEIVER UNIT, REMOCON GP1U52A			
IC402	8-759-920-03	(C4010)...IC GP1U52			
IC501	8-759-631-39	IC M5204P			
IC701	8-719-970-19	DIODE GP1A521			
IC901	8-759-631-40	IC M5294P			
J507	1-568-518-21	(C400,C500)...JACK, LARGE TYPE(PHONES)			
L301	*1-410-858-11	INDUCTOR	0UH		
L401	*1-410-858-11	(TYPE 1)...INDUCTOR	0UH		
M101	X-4917-504-1	MOTOR ASSY (SLED)			
M102	X-4917-523-1	MOTOR ASSY (SPINDLE)			
M401	A-4604-228-A	MOTOR ASSY, LOADING			
M701	A-4604-232-A	MOTOR ASSY, ROTARY			
Q101	8-729-116-57	TRANSISTOR 2SB1013			
Q201	8-729-115-77	TRANSISTOR BA1L4M			
Q202	8-729-900-61	TRANSISTOR DTA114ES			
Q901	8-729-902-63	TRANSISTOR DTA124ES			
Q902	8-729-900-61	TRANSISTOR DTA114ES			
Q903	8-729-154-83	TRANSISTOR 2SB548			
R101	1-249-397-11	CARBON	22	5%	1/4W
R102	1-249-405-11	CARBON	100	5%	1/4W
R103	1-249-417-11	CARBON	1K	5%	1/4W
R104	1-249-433-11	CARBON	22K	5%	1/4W
R105	1-247-864-11	CARBON	24K	5%	1/4W
R106	1-249-441-11	CARBON	100K	5%	1/4W
R107	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-249-431-11	CARBON	15K	5%	1/4W
R109	1-249-431-11	CARBON	15K	5%	1/4W
R110	1-249-425-11	CARBON	4.7K	5%	1/4W
R111	1-249-425-11	CARBON	4.7K	5%	1/4W
R201	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-249-433-11	CARBON	22K	5%	1/4W
R203	1-249-414-11	CARBON	560	5%	1/4W
R204	1-249-441-11	CARBON	100K	5%	1/4W
R205	1-215-434-00	METAL	3.6K	1%	1/6W
R206	1-249-441-11	CARBON	100K	5%	1/4W
R207	1-249-440-11	CARBON	82K	5%	1/4W
R208	1-247-889-00	CARBON	270K	5%	1/4W
R209	1-249-435-11	CARBON	33K	5%	1/4W
R210	1-247-896-11	CARBON	510K	5%	1/4W
R211	1-249-427-11	CARBON	6.8K	5%	1/4W
R212	1-247-881-00	CARBON	120K	5%	1/4W
R213	1-249-423-11	CARBON	3.3K	5%	1/4W
R214	1-249-425-11	CARBON	4.7K	5%	1/4W
R215	1-247-882-11	CARBON	130K	5%	1/4W
R216	1-249-432-11	CARBON	18K	5%	1/4W
R217	1-249-432-11	CARBON	18K	5%	1/4W
R218	1-249-437-11	CARBON	47K	5%	1/4W
R219	1-249-435-11	CARBON	33K	5%	1/4W
R221	1-249-441-11	CARBON	100K	5%	1/4W
R222	1-249-417-11	CARBON	1K	5%	1/4W
R301	1-215-469-00	METAL	100K	1%	1/6W
R302	1-215-469-00	METAL	100K	1%	1/6W
R303	1-249-429-11	CARBON	10K	5%	1/4W
R304	1-249-441-11	CARBON	100K	5%	1/4W
R305	1-249-429-11	CARBON	10K	5%	1/4W
R306	1-249-433-11	CARBON	22K	5%	1/4W
R307	1-247-903-00	CARBON	1M	5%	1/4W

Ref.No.	Part No.	Description			
R308	1-249-417-11	CARBON	1K	5%	1/4W
R309	1-249-417-11	CARBON	1K	5%	1/4W
R310	1-249-411-11	CARBON	330	5%	1/4W
R311	1-249-417-11	CARBON	1K	5%	1/4W
R312	1-249-417-11	CARBON	1K	5%	1/4W
R313	1-249-417-11	CARBON	1K	5%	1/4W
R401	1-249-429-11	CARBON	10K	5%	1/4W
R402	1-249-429-11	CARBON	10K	5%	1/4W
R403	1-249-429-11	CARBON	10K	5%	1/4W
R404	1-249-439-11	CARBON	68K	5%	1/4W
R408	1-249-433-11	CARBON	22K	5%	1/4W
R409	1-249-433-11	CARBON	22K	5%	1/4W
R410	1-249-433-11	CARBON	22K	5%	1/4W
R411	1-249-433-11	CARBON	22K	5%	1/4W
R412	1-247-882-11	CARBON	130K	5%	1/4W
R413	1-247-883-00	CARBON	150K	5%	1/4W
R414	1-247-880-11	CARBON	110K	5%	1/4W
R415	1-249-440-11	CARBON	82K	5%	1/4W
R416	1-247-883-00	CARBON	150K	5%	1/4W
R417	1-247-882-11	CARBON	130K	5%	1/4W
R418	1-247-883-00	CARBON	150K	5%	1/4W
R419	1-249-441-11	CARBON	100K	5%	1/4W
R420	1-249-393-11	CARBON	10	5%	1/4W
R421	1-249-441-11	CARBON	100K	5%	1/4W
R422	1-249-393-11	CARBON	10	5%	1/4W
R423	1-249-441-11	CARBON	100K	5%	1/4W
R424	1-249-429-11	CARBON	10K	5%	1/4W
R425	1-249-429-11	CARBON	10K	5%	1/4W
R426	1-249-441-11	CARBON	100K	5%	1/4W
R427	1-249-441-11	CARBON	100K	5%	1/4W
R501	1-249-435-11	CARBON	33K	5%	1/4W
R502	1-249-440-11	CARBON	82K	5%	1/4W
R503	1-249-439-11	CARBON	68K	5%	1/4W
R504	1-249-417-11	CARBON	1K	5%	1/4W
R505	1-249-402-11	(C400,C500)...CARBON	56	5%	1/4W
R551	1-249-435-11	CARBON	33K	5%	1/4W
R552	1-249-440-11	CARBON	82K	5%	1/4W
R553	1-249-439-11	CARBON	68K	5%	1/4W
R554	1-249-417-11	CARBON	1K	5%	1/4W
R555	1-249-402-11	(C400,C500)...CARBON	56	5%	1/4W
R701	1-249-416-11	CARBON	820	5%	1/4W
R901	1-247-883-00	CARBON	150K	5%	1/4W
R902	1-249-425-11	CARBON	4.7K	5%	1/4W
R903	1-249-385-11	CARBON	2.2	5%	1/4W
R904	1-249-385-11	CARBON	2.2	5%	1/4W

Ref.No.	Part No.	Description
RV1	1-228-995-00	RES, ADJ, CARBON 22K
RV2	1-228-993-00	RES, ADJ, CARBON 4.7K
RV3	1-228-995-00	RES, ADJ, CARBON 22K
RV4	1-228-995-00	RES, ADJ, CARBON 22K
RV5	1-238-394-11	RES, ADJ, METAL GLAZE 1K
RV501	1-238-302-21	(C400,C500)...RES, VAR, CARBON 1K/1K (LEVEL)
S1	1-571-686-11	SWITCH, KEY BOARD (CONTINUE)
S2	1-571-686-11	SWITCH, KEY BOARD (SHUFFLE)
S3	1-571-686-11	SWITCH, KEY BOARD (PROGRAM)
S4	1-571-686-11	SWITCH, KEY BOARD (TIME)
S5	1-571-686-11	SWITCH, KEY BOARD (▷▷|)
S6	1-571-686-11	SWITCH, KEY BOARD (|◁◁)
S7	1-571-686-11	SWITCH, KEY BOARD (■)
S8	1-571-686-11	SWITCH, KEY BOARD (▷ II)
S9	1-571-685-11	SWITCH, KEY BOARD (⏏ OPEN/CLOSE)
S10	1-571-685-11	SWITCH, KEY BOARD (DISC SKIP)
S101	1-571-274-11	SWITCH, LEAF (LIMIT IN)
S401	1-571-300-11	SWITCH, ROTARY (UP/OUT)
S402	1-554-205-00	SWITCH, PUSH (ON/OFF)
S403	1-570-381-11	SWITCH, SLIDE (DIWN/IN)
S901	1-552-425-11	(C400,C500).....SWITCH, PUSH (POWER)
S901	1-571-305-11	(C401).....SWITCH, PUSH (1KEY)(POWER)
S902	⚠.1-571-722-11	(E)....SWITCH, VOLTAGE SELECTION
T901	⚠.1-449-024-11	(US,Canadian)...TRANSFORMER, POWER
T901	⚠.1-449-025-11	(AEP).....TRANSFORMER, POWER
T901	⚠.1-449-026-11	(E).....TRANSFORMER, POWER
X301	1-567-908-21	VIBRATOR, CRYSTAL (16MHz)
X401	1-577-358-21	VIBRATOR, CERAMIC (4MHz)

ACCESSORY & PACKING MATERIAL

	1-559-533-11	CORD, CONNECTION
	3-750-257-11	(Canadian,AEP,E)...MANUAL, INSTRUCTION
	3-750-257-21	(US).....MANUAL, INSTRUCTION
	3-750-257-41	(AEP).....MANUAL, INSTRUCTION
*4	-930-516-01	CUSHION (LEFT)
*4	-930-517-01	CUSHION (RIGHT)
*4	-930-567-01	CUSHION (FRONT)
*4	-930-518-01	(C500)....INDIVIDUAL CARTON
*4	-930-518-11	(C400)....INDIVIDUAL CARTON
*4	-930-518-21	(C401)....INDIVIDUAL CARTON

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

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Audio Group

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